

MARCH 14, 1955

AREA Convention Program . . . p. 58

RAILWAY AGE

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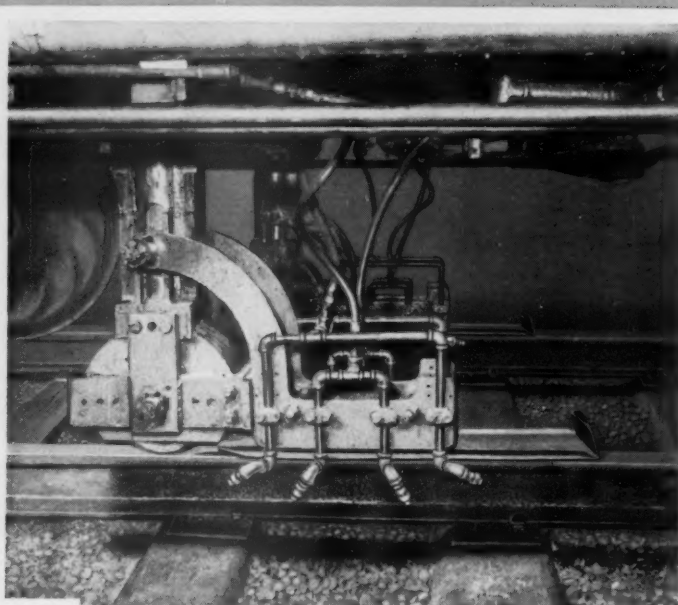
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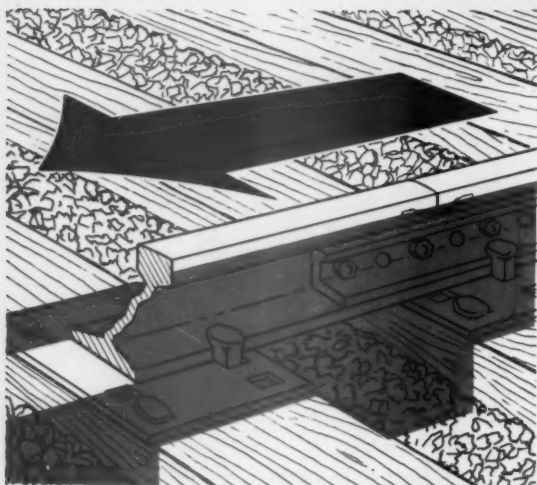
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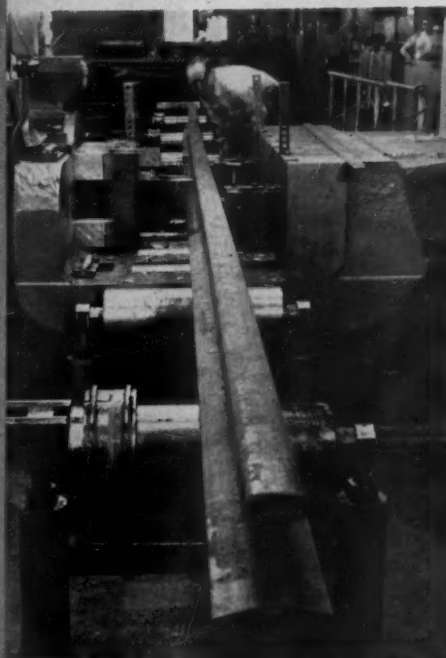
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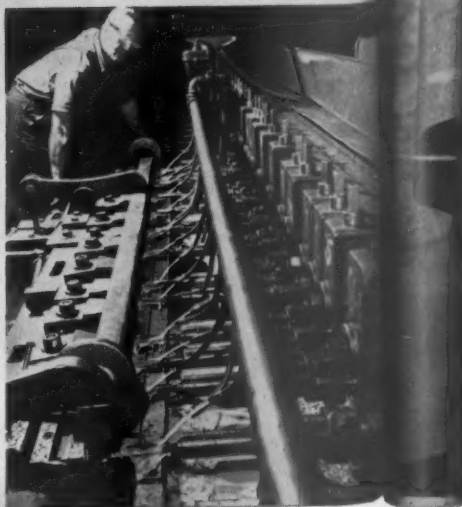
Bolt and rivet holes are drilled in a switch-point rail, prior to treatment. Reinforcing bars have been clamped to the full-head rail, so that all pieces are accurately drilled on a multiple-spindle drill press.

16

Bethlehem switch points—one of the most popular present-day applications of heat-treated trackwork—are treated prior to planing. It has been determined through extensive experiments, that due to the unsymmetrical section and the thinness of the actual point, a far superior product is obtained when it is heat-treated first, then planed.

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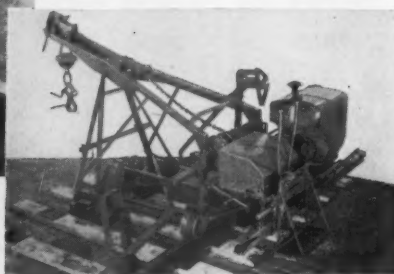


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March 14, 1955

Vol. 138, No. 11

Week at a Glance

That strike called for today against the L&N and two affiliated roads by some of the "non-ops" has an unusual aspect. Its purpose, says the company, is to force acceptance of the unions' compulsory national health and welfare plan, instead of the L&N's own plan, which the road describes as optional, equally beneficial, and considerably cheaper. 7

The belt conveyor scheme is up again in Ohio—and the anticipated knock-down, drag-out fight may be the last round in the prolonged battle. 8

How much do you know about Car Service rules? Another "quiz" gives you a chance to test your knowledge. 53

FORUM: Mergers may not, in all cases, be economically justifiable. But where they are, i.e., where they can contribute something toward better or more economical service, they should not be prohibited on such non-economic grounds as, for example, the maintenance of local prestige. 55

Diesel control through records is maintained by the Frisco in a centralized bureau; one result has been to cut down paper work of shop foremen. 56

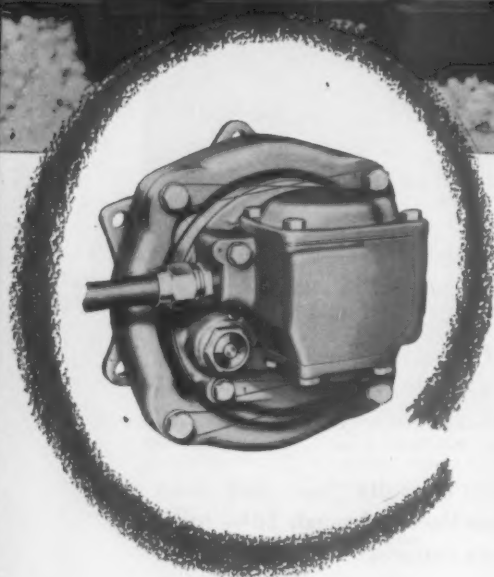
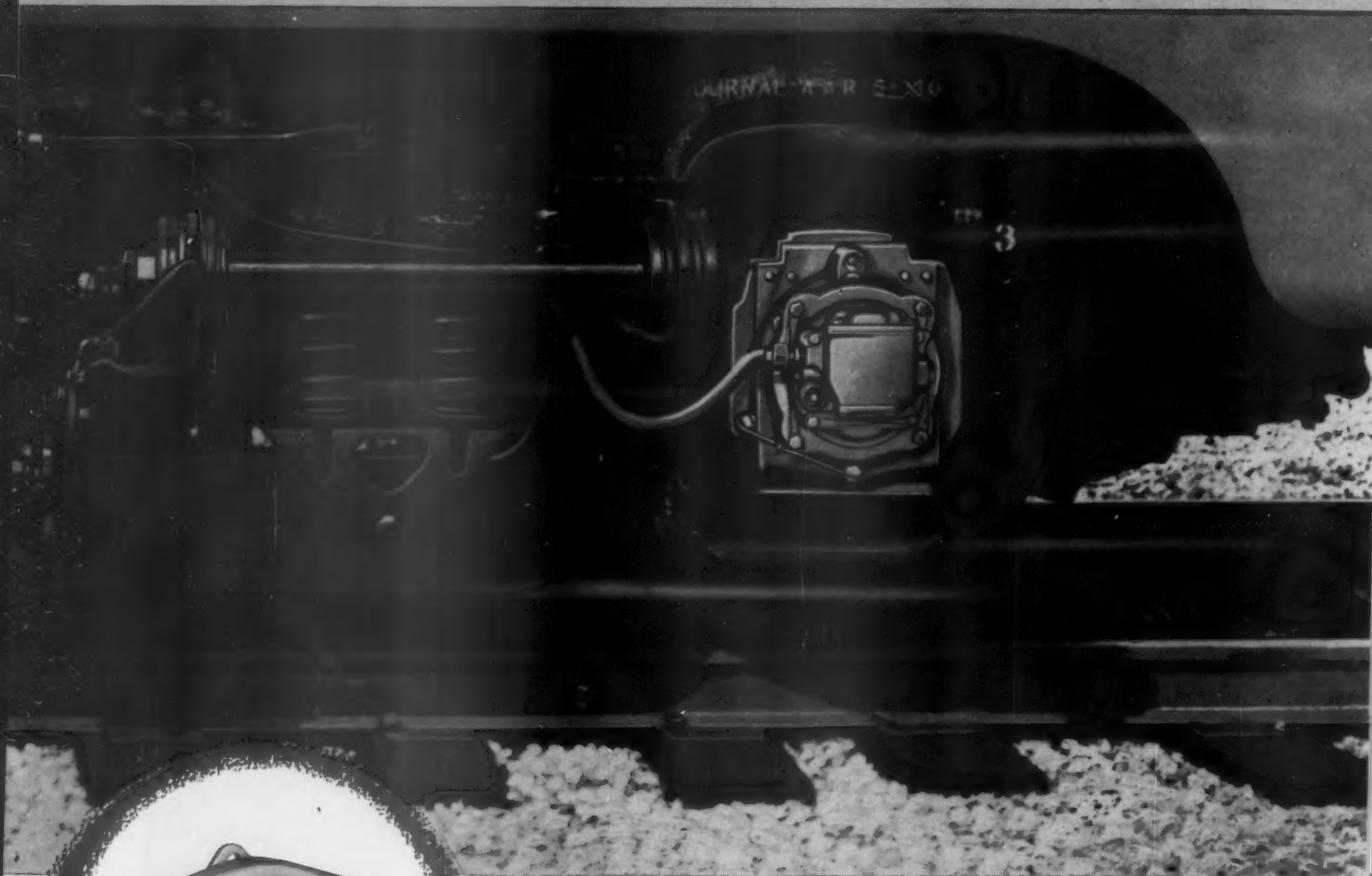
It's AREA week in Chicago—and there's a full program for those who attend the big annual convention. 58

Reflectors help visibility of cars, crossbucks, and wayside signs on the Great Northern; the double objectives of safety and economy are being realized. 59

A new spur to serve mineral deposits has just been completed by the Canadian Pacific through 16 1/2 miles of tough terrain in southern Ontario. 64

The Monon calls it "Trailer-Maid"—and gives its pic-


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Operating revenues, one month	
1955	\$752,741,347
1954	749,825,835
Operating expenses, one month	
1955	\$590,002,298
1954	626,806,095
Taxes, one month	
1955	\$ 74,547,270
1954	71,488,503
Net railway operating income, one month	
1955	\$ 68,660,196
1954	32,545,876
Net income, estimated, one month	
1955	\$ 52,000,000
1954	20,000,000
Average price railroad stocks	
March 8, 1955	90.31
March 9, 1954	62.17
Carloadings, revenue freight	
Eight weeks, 1955	5,099,857
Eight weeks, 1954	4,951,251
Average daily freight car surplus	
Wk. ended March 5, 1955	46,370
Wk. ended March 6, 1954	129,386
Average daily freight car shortage	
Wk. ended March 5, 1955	1,262
Wk. ended March 6, 1954	257
Freight cars on order	
February 1, 1955	18,395
February 1, 1954	27,959
Freight cars delivered	
One month, 1955	2,008
One month, 1954	4,944

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Week at a Glance CONTINUED

turesquely-named new piggyback service "job shop" supervision. **67**

What's new in engineering and maintenance—A special 10-page section describes new products and new methods of special interest to railway engineering officers. **69**

BRIEFS

"The first of the new style passenger coach designs expected to be on the rails is being developed by General Motors," according to the current issue of the Pennsylvania employees' magazine, The Pennsy. "It will come to the PRR for inspection and test runs," The Pennsy says. General Motors sources, however, have declined to confirm this report. The "coach designs" which The Pennsy says General Motors is developing should not, apparently, be confused with the "completely new type of passenger train" which the PRR is understood to be working out with another builder (*Railway Age*, February 21, page 8, and February 28, page 16).

Demand for a \$1.80 daily pay differential for yard foremen over yard helpers, by the Switchmen's Union of North America, has been turned down by the arbitration board. A similar differential amounting to \$2 daily is among pending demands of the Brotherhood of Railroad Trainmen. SUNA President W. A. Fleete said the board's ruling "seriously injures labor relations under the Railway Labor Act."

Anti-subsidy argument: "The American people are adult enough to know they only deceive themselves by keeping postal rates artificially low, and taxing themselves to pay the difference." Thus does Postmaster General Summerfield argue for a 4-cent letter rate. Low postage rates "are misleading when the difference is paid by the taxpayer," he explains, asking: "Isn't it fairer to charge those who receive the direct benefit rather than the general taxpayer?" Strange to have such a good anti-subsidy argument coming from one high in an administration which favors subsidies in the transport field.

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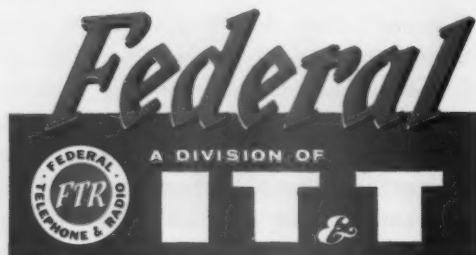
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the right-of-way! Bigger dividends in
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mit information and emergency calls
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the range of a fixed station, or make
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Non-Ops to Tie Up Three Roads?

Ten groups threaten walkout March 14 because L&N won't make health and welfare benefit program compulsory and use national fund setup—L&N says its plan is better

G. E. Leighty, chairman of the National Conference Committee of unions representing railroad non-operating employees, announced in Washington March 9 that the non-ops would strike at 6 a.m. C.S.T. March 14, on the Louisville & Nashville, the Nashville, Chattanooga & St. Louis and the Clinchfield.

The strike call came out of the failure to settle, with those roads, the "fringe benefit" case which was settled generally last August (*Railway Age*, August 30, 1954, page 7, and January 24, 1955, page 16).

The strike call listed all of the original "fringe benefit" demands as issues. The general settlement was on a compromise basis. Since the general case went to an emergency board, there are no further Railway Labor Act procedures available, except more mediation. The National Mediation Board advised the parties that its services are available for that purpose.

"Surprised and Distressed"—President John E. Tilford, of the L&N, said he was "surprised and distressed," by the proposed walkout. "The company has put into effect the recommendations of the Presidential emergency board and we are not aware of any benefits that can be gained for our

employees by a strike," he declared.

Mr. Tilford points out that the emergency board, in reporting to the President, recommended that a health and welfare plan be made available to all affected employees and that costs of the plan be divided equally between carriers and employees. The brotherhoods have insisted that benefits be handled through a national policy and fund and that all affected employees be compelled to pay half the cost of such insurance. The L&N is unwilling to agree to such terms, Mr. Tilford asserted.

Cheaper Plan—Rather than deducting \$3.40 from every non-operating employee's pay check "regardless of his wishes or individual needs," and advancing this with equal payments from the railroad into the national insurance fund, the railroad has made outside insurance arrangements (with identical benefits) at a cost of but \$1.85 per month to any employee desiring the benefits, Mr. Tilford revealed.

"Of the remittance demanded—\$6.80 per month for each employee for the national insurance—only \$5.95 is to be paid to the insurance company for employee benefits and the difference is to be placed in a national special

account, the purpose of which is vague," Mr. Tilford stated.

"The only real difference between the treatment of L&N non-operating employees and similar employees of other railroads in these proceedings is that our employees have a less costly, separate insurance policy," he concluded.

Two Strikes Averted

A threatened strike against the Pennsylvania, called for March 6, and involving some 20,000 maintenance employees represented by the CIO Transport Workers Union, was called off, following intervention by the National Mediation Board. The union contended, and the railroad denied, that temporary layoffs of approximately 12,000 employees, because of reduced traffic, had "cut maintenance below the safety point."

Another strike, called for April 2 on New York Central Lines East of Buffalo by the Brotherhood of Locomotive Engineers, was similarly averted under provisions of the Railway Labor Act.

In this case the engineers threatened to strike after the railroad notified them that it wished to cancel an agreement which had become effective January 1, covering promotion pay for new enginemen promoted from firemen. The railroad contends that it is an "innocent party" in what it describes as essentially a jurisdictional dispute between the BLE and the Brotherhood of Locomotive Firemen and Enginemen.



A CANADIAN PACIFIC EXPRESS truck under police guard loads part of an exhibition of paintings valued at \$20 million, at Toronto, for delivery to the Toronto Art Gallery. The

paintings, a traveling exhibition of 17th century Dutch masters, traveled by rail express car from Toledo, Ohio, to Toronto in the course of a tour of North America.

Eliminate "Family Quarrels," Johnston Asks

Railroads could make greater progress in a highly competitive market if management and labor would eliminate "the questionable luxury of family quarrels about trivial things," Paul W. Johnston, president of the Erie, told the Pacific Coast Shippers Advisory Board at San Francisco on March 11.

The Erie president declared that by solving their internal problems quickly, the railroads can do a better job for shippers and other users of railroad transportation.

"The railroad industry is in the most highly competitive situation in its entire history," he said. "Recognition of this fact should bring home to every railroader the need for joining forces for our common good and for the good of the nation's economy. This does not mean that any group should abdicate its rights nor discontinue its efforts to properly advance the interests of those

to whom it has responsibilities. Our problem is to be big enough in our thinking so that we will not confuse the two fields—the one of common interest, and the one of divergent interest.”

Mr. Johnston said he was not advocating the surrender of any basic free-

doms to hold different opinions but instead that “these differences need not cloud our thinking to the extent that we pursue the suicidal course of refusing to cooperate wholeheartedly for the preservation and growth of the industry to which many of us have given long years of service.”

and transportation committee. The senate bill is in committee without hearing assignment, pending outcome of house hearings. When the house committee concludes its hearings, it must then decide whether to vote against the proposal or to report it out onto the house floor with recommendation of passage. Just how soon the committee will act, and what course it will elect, even those close to the case won't venture to guess.

Broad Campaign — To achieve widespread public comprehension of the issues involved, the railroads' committee this year took the issues directly to the voters with, among other media, a 25-min sound-color film, “Decision for Ohio,” which by now has had more than 560 showings to a total audience of some 102,000 voters.

The film makes no bones about the railroads' self-interest in the anti-belt campaign. Instead, it aligns the interests of the carriers with those of the average citizen whose property stands to be condemned for what, if it came to pass, would in effect, be a contract, rather than common, carrier.

“Decision for Ohio” demonstrates how such a belt system could divert a vast tonnage of coal and ore from the rails with serious effects upon railroad employment and Ohio industry generally. It shows how that diversion would hamper the railroads' ability to continue other common carrier services throughout the state. It delves into the economics of belt conveyors, and shows

Competitive Transport

Ohio's Decision Is Near

With house hearings on the Riverlake belt conveyor bill approaching an end, the outcome of this controversial case remains anybody's guess

For the third time in six years, Ohio's general assembly is pondering whether or not the right of eminent domain [the authority to buy property without consent of the owners] should be granted to a long-distance belt conveyor system which would handle only coal, iron ore and possibly limestone, for a very limited number of industries.

Ever since 1949, Riverlake Belt Conveyor Lines, Inc., has sought authority to condemn land to build and operate as a common carrier an elevated “rubber railroad” between the Lake Erie port of Lorain and East Liverpool, on the Ohio river, with branch belt lines to Youngstown and Cleveland. The stated purpose of the system is to haul iron ore from lake vessels to Youngstown and Pittsburgh steel mills [via the Ohio river], and to carry coal to the lake port and to industries along the route.

In 1949 bills introduced in both the state's senate and house of representatives died in committee. In 1951 the senate's judiciary committee did vote the bill to the rules committee, but the measure moved no further. In 1953, Riverlake's president, H. B. Stewart, Jr. [who also heads the Akron, Canton & Youngstown Railroad], felt the “legislative climate was not propitious,” and no bills were introduced in either house.

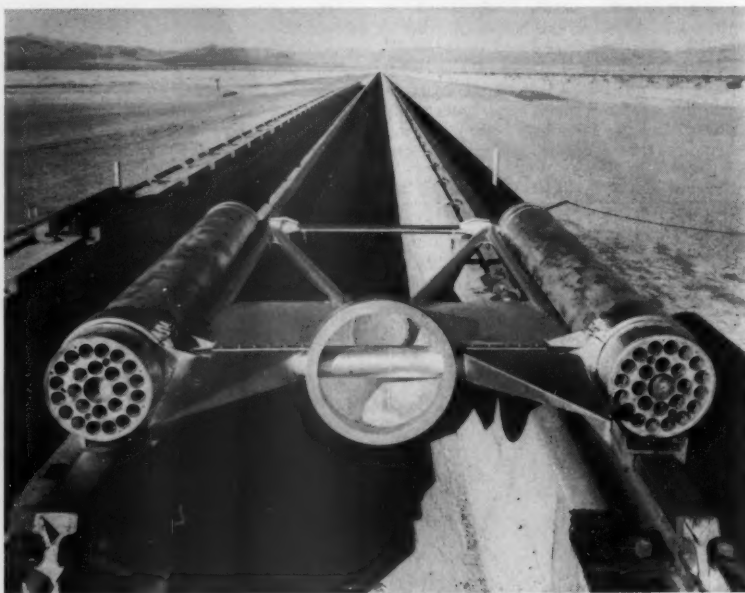
But compared to 1949 and 1951, the present campaign has been a tough, bare-fisted affair, partly, perhaps, because a prevalent Columbus rumor has it that this is to be the belt proponents' last effort.

Opposition to the belt scheme has come from many groups within the state but railroads [excluding the AC&Y] have borne a major share of the burden through their special transportation committee headquartered at Columbus. When twin belt bills [House Bill No. 6 and Senate Bill No. 1] were first introduced in the general assembly in January, the committee, under B. W. Tyler, assistant to vice-president, Pennsylvania, published a basic declaration of policy which said in part:

“Because railroads must be free and

able to serve everybody . . . they should not be weakened by self-interest operation of any other form of transportation. It is the established policy of our railroads to warn the public about the inroads of any transportation system which will not be operated in the overall public interest or whose operation will so undermine the economic structure of the railroads that they cannot function for the good of all.”

As this issue went to press, the railroad organization's final witnesses were being heard by the house commerce



SNORT—Called the world's fastest and straightest “railroad,” this Supersonic Naval Ordnance Research Track at China Lake, Cal., is 4.1 mi long, standard gage, and laid to a horizontal tolerance of 0.06 in. and a vertical tolerance of 0.036 in. The special Bethlehem 170-lb rails are supported by a concrete foundation

containing 680 tons of steel reinforcing bars. Speeds more than three times the speed of sound are attained on the track, which is constructed in such manner that it can ultimately be extended to a length of 11 mi. The Air Force has a similar installation at Edwards Air Force Base in California's Mojave Desert.

C&O SETS SPEED RECORD WITH FEBRUARY REPORT

What is undoubtedly a new record in fast reporting of monthly operating results was established by the Chesapeake & Ohio when it issued, on March 2, its revenue and expense figures for February and for the first two months of 1955.

The C&O's determination to complete its reports almost immediately after the close of the month to which they refer, and some of the methods to be used in accomplishing that result, were outlined in *Railway Age*, November 16, 1953.

The road's February report, incidentally, showed net income of \$3,500,000, or 44 cents per common share, compared with \$2,000,000, or 25 cents per share, in February 1954. For January and February combined, gross revenues were up \$5,400,000 from the same two months of last year, and expenses down nearly \$600,000, leaving net income of \$7,200,000, against \$4,400,000.

by many examples how the belt idea was discarded in favor of railroads for new major mining operations established in Bolivia, Jamaica, Liberia, Labrador and even Minnesota.

The film questions both initial and operating costs of the conveyor as compared to a railroad. It foresees many belt operating limitations, e.g., a single breakdown must halt the entire system to prevent a pileup. How, the film asks, can the belt prevent breakage as coal drops from one belt to the next in some 172 "flights" between terminals? How can it handle fine grades of stoker coal? What happens when ore freezes? How can the belt maintain separation of the more than 600 grades, sizes and trade names of coal now moving through Lake Erie ports?, etc., etc.

A major danger, the film points out, lies in possible failure of the venture financially. By refinancing at a fraction of the belt's initial cost, new operators could publish low rates not reflecting true costs. These the railroads would have to meet by seeking compensating increases from shippers elsewhere, or simply surrender the large and desirable ore and coal traffic.

In its tenor the film is simple. Its points are made with conservative evidence—largely that of outside and qualified experts. It has been termed, in itself, an outstanding achievement in railroad public relations.

RLEA Opposes Extension Of RI Motor Authority

The Railway Labor Executives' Association has attacked the Rock Island's newly-broadened motor carrier rights as detrimental to railroad personnel and to railroads themselves.

In a petition for reconsideration of the Interstate Commerce Commission order setting up the new RI authority (*Railway Age*, December 13, 1954, page 11), RLEA said the new service will tend to reduce work for railroad employees and "increase competition" between railroads and truckers. The ICC decision removed "tie-to-rails" restrictions from certificates covering trucking operations of the Rock Island subsidiary, Rock Island Motor Transit Company.

Operations

Mills Advises Attention to Brake Tests

Concerned about non-observance of rule at points where motive power or crews are changed—Also discusses proposals to establish joint car-repair facilities at interchange points

Non-observance of the rule requiring air-brake tests at points where motive power or crews are changed "is at present causing considerable concern, and in many locations proper adjustment of piston travel is being sadly neglected," S. N. Mills, assistant director of the ICC's Bureau of Safety and Service, said last week.

Speaking at a March 11 meeting of the Eastern Car Foreman's Association in New York, Mr. Mills went on to advise that "these are matters which should be given careful and continuing attention by all railroads."

Moving BO Cars—Mr. Mills also discussed legal aspects of railroad proposals to establish joint car-repair facilities at interchange points. At such facilities, cars having defective safety appliances, which were discovered when they were offered in interchange, could be repaired with a minimum delay and back-haul movement.

The proposals grew out of a resolution wherein the National Association of Shippers Advisory Boards suggested that the Association of American Railroads make a study designed to effect arrangements which would permit the forwarding of a rejected car to the nearest repair shop of the receiving or delivering carrier. The plan for joint repair facilities at interchange points was suggested by the general committee of AAR's Operating-Transportation Division.

The Law—As Mr. Mills pointed out, the law's general requirement is that movement of a defective car to a place of repair can be made only by the carrier upon whose line the car became defective. If, however, a defective car is offered in interchange in association with other cars that are not defective, a receiving carrier may, in refusing the defective car, perform such incidental switching as is necessary to separate it from other cars.

And the incidental switching may be to a joint repair track "if such dispo-

The labor organization said it had not intervened in the case before the decision was made because the commission had always maintained its "key point" limitations in similar situations in the past. The petition, closely paralleling one filed by the American Trucking Associations, whose position RLEA endorsed, asked the commission to modify its order so as to reimpose conditions designed to keep the trucking operations auxiliary to rail services.

sition would require no more handling than would otherwise be required in consummating refusal," Mr. Mills said. On such joint track, the car would be at the nearest repair facility of the responsible carrier, and "it is not material by whom the repairs are made," he added.

AAR Reaction—In a recent circular dealing with the proposal, AAR Vice-President R. G. May said the arrangement "would permit the receiving line to make repairs and accept cars in interchange that are now being delayed on account of back-haul movement to a repair point on the line of the delivering carrier." Mr. May added that any such arrangement should be submitted to Mr. Mills for clearance.

In another part of his New York address, the assistant director of the ICC bureau referred to pending revision of the commission's order prescribing safety appliance standards. He said that "few, if any, radical changes" appear in the proposed new order, which does, however, have 26 classifications of cars and locomotives as compared with the present order's 18.

CNR Cuts "Ocean Limited" Schedule 2 Hr, 20 Min

New fast schedules for Canadian National trains between Halifax and Montreal will become effective April 24. Running time of the "Ocean Limited" west from Halifax to Montreal will be cut from 24 hr, 15 min, to 21 hr, 55 min—a reduction of two hr, 20 min. Eastbound, the train's time will be cut two hr, five min, from 22 hr, 50 min, to 20 hr, 45 min.

Running time of the "Scotian" will be reduced one hr, 50 min from Halifax to Montreal and one hr, 40 min in the opposite direction.

Savings in running times of the two trains were attributed to the re-

DETROIT		Form R363G No. 00000		DETROIT		Form R363G No. 00000		①	
PARMELEE TPN. CO.		NEW YORK CENTRAL R. R.		540 N. Y. C.		CHICAGO		1	
From: N. Y. C. DEPOT		From: CHICAGO, ILL.		131 C. & NW		ST. PAUL		3	
To: DEPOT		To: CHICAGO, ILL.		133 C. & Q.		DULUTH		3	
GOOD FOR TRANSFER		ROUND TRIP TICKET		140 CASH P&P				3	
OF ONE PASSENGER		OF CLASS PUNCHED		310 Gr. Nov.		PORTLAND		5	
AND ORDINARY BAGGAGE		LIMIT 6 MONTHS		550 Mer. Rec.				5	
Destination		Destination		902 Gr. Rec.				5	
SAN FRANCISCO, CAL.		SAN FRANCISCO, CAL.		Pullman 3		Coach 4		FARE MIXED Baggage	
Subject to conditions of contract of this ticket, and is void if detached, altered or mutilated in any manner.		Subject to conditions of contract of this ticket, and is void if detached, altered or mutilated in any manner.		X		X		X	
VIA CRIC - SIP or OUL - SEA - PORT & SO. PAC.		VIA CRIC - SIP or OUL - SEA - PORT & SO. PAC.		X		X		X	
Issued by		Issued by		X		X		X	
THE NEW YORK CENTRAL R. R. Co. - 540		THE NEW YORK CENTRAL R. R. Co. - 540		X		X		X	

New York Central Tests Punch Card Ticket

A new type of ticket for passengers whose trips involve travel over more than one railroad was introduced in Detroit by the New York Central on March 1. Railroad officers said that, after the new tickets are tested in Detroit, their use is expected to be extended through the Central's 11-state system.

The new tickets are IBM cards, 7 $\frac{3}{8}$ in. by 3 $\frac{1}{4}$ in., perforated vertically so

they may be folded in half for easy carrying. The more railroads involved in a trip, the more cards are required, but all are securely fastened by an eyelet in the upper left corner.

The Central's accounting department developed the new system after extensive research. It is designed primarily to simplify accounting connected with ticket sales. At the road's accounting offices, the punched cards will

permit automatic machines to tabulate quickly results heretofore obtained only after long processing of a mass of accounting details.

In planning the tickets, however, the railroad sought a form that would be convenient for passengers, easy for conductors to read, and easy for ticket agents to issue.

For travel in Pullman cars, the new punched cards are used in conjunction with regular Pullman tickets for the space occupied.

placement of steam power with diesel.

J. T. Whiteford, general passenger traffic manager for the CNR system, said that, in drawing up the revised schedules, serious thought had been given to convenient arrival and departure times at intermediate points and to suitable connections with Newfoundland, Cape Breton, Prince Edward Island and New Brunswick train services.

Through sleeping cars between Montreal and Charlottetown, P.E.I., formerly operated in the "Maritime Express" eastbound and the "Scotian" westbound, will be carried in the faster "Ocean Limited" in both directions after April 24. The change will reduce travel time from Montreal to Charlottetown by five hr., 20 min. with a three-hr., five-min reduction in the reverse direction.

Claim Prevention Pays, the UP Finds

Its plastic-sided damage-prevention box car and its "Perfect Shipping" train (*Railway Age*, April 19, 1954, page 15), combined with its constant program of prevention activities, lowered the Union Pacific's 1954 freight claim bill nearly \$600,000, according to O. J. Wullstein, the road's general claims agent.

The reduction represented an 11% decrease over loss and damage payments in 1953, he revealed. Evidence that the reduction actually stemmed from more careful handling of freight equipment was found in impact register records, which showed a 39.2% system-wide reduction in overspeed switching impacts over the same period, he said.

A second "Perfect Shipping" train will be operated over the system this spring, Mr. Wullstein stated. The transparent damage-demonstration box car is presently on loan to other roads.

B&O Extends Its "Tofcee" Service

The Baltimore & Ohio will extend its "Tofcee" service for the handling of highway trailers on flat cars, effective March 15.

New service will be provided between Washington, D. C., on the one hand, and Pittsburgh, Chicago, Indianapolis, Cincinnati and St. Louis on the other; also between Indianapolis, on the one hand, and Washington, Baltimore and Philadelphia on the other. Other new services will be established between Toledo and Cincinnati; between Chicago and Cincinnati; and between Pittsburgh, Cincinnati and St. Louis. Extended service will be pro-

vided between Baltimore and Philadelphia, on the one hand, and Cincinnati, St. Louis and Indianapolis on the other.

"Tofcee" service was established last July 20 between six major cities; its extension, according to B&O President H. E. Simpson, "is the result of the considerable interest shown in the company's original program."

Traffic

Teamsters, Industry Join To Cut Consumer Prices

The International Brotherhood of Teamsters, AF of L, will join with several of the nation's leading industries in forming a non-profit research foundation to be known as the Economics of Distribution Foundation. The group's aim will be the development of methods for getting farm and factory goods from producer to consumer in less time and at lower cost than at present. It will initiate objective studies of distribution problems—actual research will be done at established educational institutions.

David Kaplan, chief economist for the teamsters, will head the foundation

SOUTHERN TELLS PATRONS, "FOUL WEATHER ISN'T FAIR!"

The Southern, in an advertisement run in on-line newspapers last month, pointed out to its patrons the inability of the road to provide foul-weather "stand-by" service. Explaining that, today, only five per cent of intercity travel is by railroad and that the cost of providing standby service (with surplus cars costing \$200,000 each) would be prohibitive, the road answered criticism received from both regular and "emergency" customers who may be inconvenienced when trains are overcrowded because airlines are grounded and highway travel is hazardous.

and T. W. Kheel, chairman of the private transit industry in New York City, will be the group's general counsel. The board of directors will be made up of industry, union and civic leaders and an advisory panel of university professors. The foundation will not enter into negotiations between management and labor groups.

Mr. Kaplan, describing the need for streamlined distributive processes, noted that, for example, it now costs more to get an orange from the Washington Market in Manhattan to a New York housewife than to grow, grade, pack and ship the same orange from California to New York. He went on to say that relatively high costs such as this, "are not due to unconscionable profits, high levels of wages and working conditions, or, as is commonly supposed, to designing middlemen. They are caused rather by outmoded methods, obsolete facilities, unsuitable systems of compensation, foolish and outdated competitive practices, and unnecessarily wasteful consumer buying habits, long overdue for a change."

A list of the participating companies will be made public after the board of directors of the foundation has been fully organized.

Temporary headquarters for the foundation will be at 30 Broad street, New York, pending completion of permanent quarters at 477 Madison avenue.

B&LE to Develop 140-Acre Industrial District

A planned 140-acre industrial district will be developed by the Bessemer & Lake Erie, at an initial cost of approximately \$500,000, in Harmar Township, a suburb of Pittsburgh, in Allegheny county, Pa. Land for the district, all of which is owned by, or under option to, the railroad, is located north of the B&LE bridge across the Allegheny river, and close to the Allegheny Valley interchange on the Pennsylvania Turnpike.

Surveys of the area indicate that it is best suited for one-story warehouses,

or light and medium industrial operations, according to F. W. Okie, B&LE president.

People in the News

Jelsma Heads ICC's Bureau of Statistics

As reported in *Railway Age*, March 7, page 14, Edward R. Jelsma, formerly transportation specialist for the Senate Committee on Interstate and Foreign Commerce, has been appointed



Edward R. Jelsma

director of the Interstate Commerce Commission's Bureau of Transport Economics and Statistics. In that position Mr. Jelsma succeeded William H. S. Stevens, who retired February 28.

Mr. Jelsma has had several years of experience as a teacher of economics and transportation, and had been with the Senate committee since 1949—as professional staff member and staff director for its Subcommittee on Domestic Land and Water Transportation.



LOUIS S. ROTHSCILD, who was sworn in on March 2 as under secretary of commerce for transportation, as successor to Robert B. Murray, Jr. (*Railway Age*, March 7, page 14).

He was born at Enid, Okla., March 15, 1915, and received his BS and MS degrees at Oklahoma A. & M. College. He taught advanced statistics while working for his MS in 1938, and the following year became professor in charge of the Economics Department at Northwestern State University, Alva, Okla.

Also in 1939 and through 1940, Mr. Jelsma was with the Standard Oil Company of California as assistant on the staff of the company's tax counsel. During the same period he did graduate work at Stanford University, also teaching economics there.

He entered the Navy in 1941, serving through 1945 and rising to the rank of lieutenant commander. From 1946 through 1948, as a civilian, he served as an accountant in the Navy's Bureau of Supplies and Accounts, as deputy fiscal director of the Bureau of Ordnance, and as assistant fiscal director of the Navy Department.

Crenshaw Retires From ICC Service

Allen Crenshaw retired February 28 as associate general counsel of the Interstate Commerce Commission. He had been with the federal government more than 25 years, about 14 of them with the commission.

New ICC Librarian

Glennie M. Norman has been appointed librarian of the Interstate Commerce Commission. An assistant librarian since 1950, Miss Norman succeeded Mildred R. Senior who retired.

Mahaffie Joins Washington Law Firm

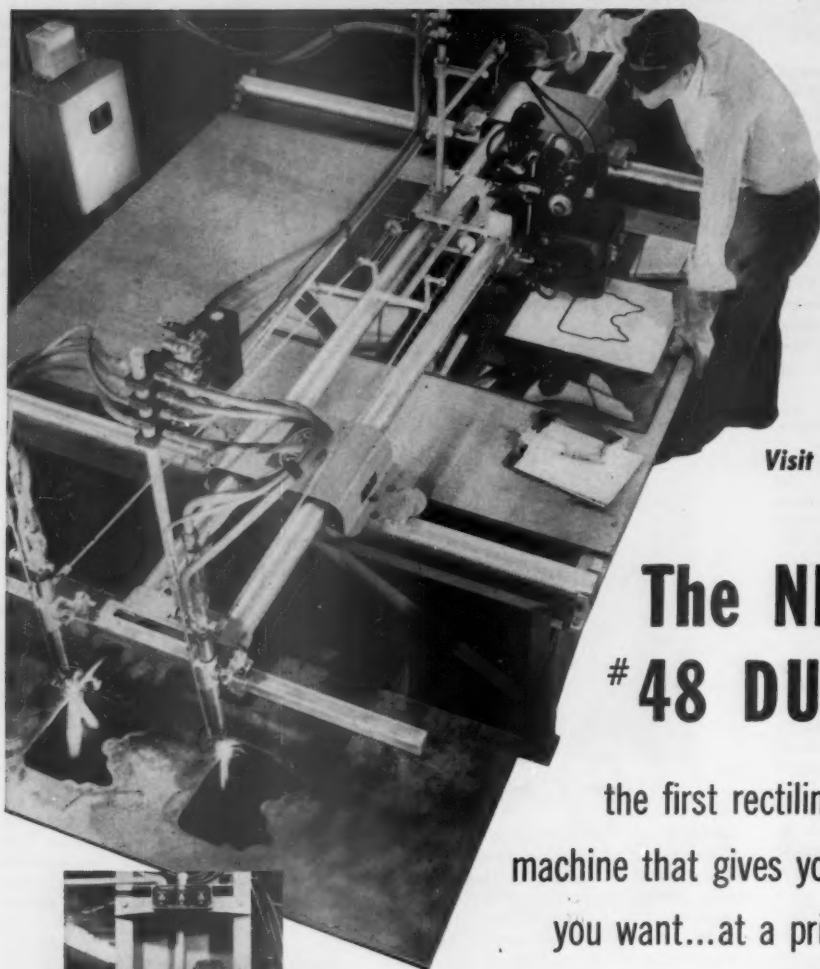
Charles D. Mahaffie, who retired December 31, 1954, as a member of the Interstate Commerce Commission, has become a member of the Washington law firm of Gardner, Morrison & Rogers. Mr. Mahaffie's retirement from the commission ended a 38-year career of continuous service with the federal government (*Railway Age*, January 24, page 11).

New Facilities

British Columbia Electric.—Five miles of the Fraser Valley branch will be laid with new 85-lb rail at a total cost of about \$143,000.

Duluth, Winnipeg & Pacific.—Has ordered from the General Railway Signal Company equipment for installation of an automatic interlocking at Virginia, Minn.
(More news on page 14)

AT THE FRONTIERS OF PROGRESS YOU'LL FIND...



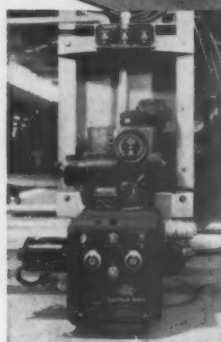
The Airco Duograph #48 cutting machine equipped with Electronic Tracer*. Note simple, sturdy construction and centralized control station. Basic tracing area 48" x 51". Additional tracing table increases length to 131".

*optional equipment (in place of manual tracer) at additional cost

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**THIS CAR'S
REVENUE
AVERAGES
\$4,000
A YEAR...**



**THIS CAR'S
REVENUE
AVERAGES
\$12,000
A YEAR**

Here's a sure way to increase box car revenue!

Evans DF* equipped box cars are a boon to your road, and your customers, too! More and more shippers are learning, by experience, that DF Loader cars practically wipe out costly, time-wasting damage claims. And 42 Class I railroads have learned that Evans DF equipped box cars bring in more business, permit bigger money-making loads per car, gross more revenue per car mile.

The average DF car travels 80 or more miles per day, while the ordinary box car goes only 42. The DF car averages a load weighing 75,000 lbs., while the standard box car averages only 40,000 lbs. The DF car does 90% of its traveling with payload, while the ordinary car travels loaded about 60% of its actual mileage.

With proof like this, is it any wonder that leading roads are ordering even more box cars with Evans DF Equipment?

*DF means damage-free, dunnage-free... only Evans makes it



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Loader will make 8 great savings!**

- 1. Your road gets more revenue per car per mile**
- 2. Your road gets more revenue per car per day**
- 3. Your road reduces costly damage claims almost to zero**
- 4. Your box cars realize a quicker turn-around**
- 5. Two of your DF cars do the work of three ordinary box cars**
- 6. Your road reduces damage to car interiors**
- 7. Your road's cars stay cleaner**
- 8. Your road builds more good will, more business, with better, safer, faster service**

... LOCKS IN LADING, ELIMINATES DAMAGE AND DUNNAGE

ENGINEER DON MC NEIL, of Ottawa, seated in the cab of a Canadian National road diesel, demonstrates use of radio-telephone communication on a manifest freight between Montreal and Vancouver. The radio, still in the experimental stage on the CNR, permits instant communication between front and rear end crews, trainmen and wayside stations, and, with walkie-talkie equipment, between flagmen and other members of train crews.



Figures of the Week

January's Net More Than Doubled

Was \$52,000,000, compared with \$20,000,000 last year—
Net railway operating income up in like manner from \$32,545,876 to \$68,660,196

Class I railroads in January had an estimated net income, after interest and rentals, of \$52,000,000—more than 2½ times the \$20,000,000 reported for January 1954.

The monthly statement of the AAR's Bureau of Railway Economics also showed January's net railway operating income, before interest and rentals, at \$68,660,196. That compared with January 1954's \$32,545,876.

In the 12 months ended January 31, the rate of return averaged 3.40%, compared with 4% for the 12 months ended January 31, 1954.

Gross in January amounted to \$752,741,347, compared with \$749,825,835 in January 1954, an increase of 0.4%. Operating expenses amounted to \$590,002,298, compared with \$626,806,095, a decrease of 5.9%.

Twenty-two Class I roads failed to earn interest and rentals in January.

CLASS I RAILROADS—UNITED STATES

	Month of January	
	1955	1954
Total operating revenues	\$752,741,347	\$749,825,835
Total operating expenses	590,002,298	626,806,095
Operating ratio —per cent	78.38	83.39
Taxes	74,547,270	71,488,503
Net railway operating income	68,660,196	32,545,876
(Earnings before charges)		
Net income, after charges (estimated)	52,000,000	20,000,000

Freight Car Loadings

Loadings of revenue freight in the week ended March 5 totaled 658,975 cars, the Association of American Railroads announced on March 10. This was an increase of 23,522 cars, or

3.7%, compared with the previous week; an increase of 68,399 cars, or 11.6%, compared with the corresponding week last year; and a decrease of 25,889 cars, or 3.8%, compared with the equivalent 1953 week.

Loadings of revenue freight for the week ended February 26 totaled 635,453 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, February 26			
District	1955	1954	1953
Eastern	113,013	105,967	125,518
Allegheny	123,015	115,966	143,668
Pocahontas	52,252	41,545	48,409
Southern	121,925	112,901	121,032
Northwestern	67,110	65,308	66,914
Central Western	106,050	101,144	110,736
Southwestern	52,088	52,180	52,377
Total Western Districts	225,248	218,632	230,027
Total All Roads	635,453	595,031	668,654
Commodities:			
Grain and grain products	42,466	41,586	39,434
Livestock	6,043	6,513	6,430
Coal	125,852	95,324	115,294
Coke	10,263	8,823	14,998
Forest products	41,528	37,418	39,818
Ore	14,604	15,700	19,319
Merchandise i.c.l.	56,382	58,646	63,593
Miscellaneous	338,315	331,021	369,768
February 26	635,453	595,031	668,654
February 19	655,035	618,623	689,430
February 12	643,859	623,706	681,604
February 5	640,735	624,385	690,613
January 29	641,979	628,193	697,442
Cumulative total, 8 weeks	5,099,857	4,951,251	5,518,385

In Canada.—Carloadings for the seven-day period ended February 21 totaled 66,413 cars, compared with 67,039 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
February 21, 1955 ..	66,413	30,397
February 21, 1954 ..	66,851	29,213
Cumulative Totals:		
February 21, 1955 ..	486,167	221,882
February 21, 1954 ..	470,940	205,373

Equipment & Supplies

Brake Shoe Announces A Composition Shoe

A composition brake shoe for railroad use, designated the "Diamond Comet," has been developed by the American Brake Shoe Company and is ready for field testing, Kempton Dunn, company president, announced March 8.

The new shoe, formed of friction materials in an organic binder, is said to wear longer and give smoother, quieter stops than the cast-iron brake shoe. It was developed in the company's Mahwah, N.J., laboratories after many years of research on materials and methods. The problem, according to Mr. Dunn, has been to eliminate the inherent tendency of composition shoes to cause greater wheel wear and to be less dependable in wet weather. Only actual railroad operation will show whether these shortcomings have finally been eliminated.

Field testing of the new composition shoe will begin on an eastern railroad this month. It requires some changes in the braking equipment of present cars. Another composition shoe, now under development in the laboratory, will be completely interchangeable with present cast-iron shoes without the expense of changes in brake rigging.

The company's experience with composition brake shoes extends back to post-World War I when it acquired the Pittsburgh Filled Shoe Company. Since then the American Brakeblok Division has made composition friction materials for automobiles, trucks, buses and heavy industrial applications. The search for composition materials suitable for railroad use was intensified after World War II. From hundreds of combinations tested came the present shoe, which the company believes warrants field testing.

Mr. Dunn said the metal shoe has proved to be completely dependable under all weather conditions and under all loads. It costs less, both initially and in terms of wheel wear, than the composition shoe. The latter will have to show in actual operation that it produces dependable friction under all conditions without causing greater wheel wear, he said.

"If the new shoe overcomes the disadvantages of previous composition shoes tested by railroads," said Mr. Dunn, "it can be produced in the company's present facilities."

FREIGHT CARS

New Haven to Get 200 New Piggyback Cars

The New York, New Haven & Hartford will acquire, under lease, from Piggy-Back, Inc., 20 Exchange place,

New York 5, 200 special 75-ft flat cars, each capable of carrying two of the largest highway semi-trailers now in common use in New Haven territory. The cars, which will cost approximately \$8,000 each, are similar to the two experimental units described in *Railway Age*, March 7, page 45. Those experimental units were built in the New Haven's shops at Readville, Mass., but the builder for the 200 service units has not yet been determined.

The **Western Maryland** has ordered from the Greenville Steel Car Company 100 70-ton, 2,003-cu ft covered hopper cars, to be equipped with roller bearing trucks. Construction of the cars is scheduled to begin in June.

LOCOMOTIVES

The **Montana Western** has ordered one 550-hp, 80-ton diesel-electric locomotive from Baldwin-Lima-Hamilton Corporation.

COMMUNICATIONS

Reading to Equip Trucks with Radio

Installation of a two-way mobile radio-telephone system on trucks of the Reading Transportation Company, to be controlled from Reading, Pa., has been announced by J. A. Fisher, president of the Reading Company. Completion of the system is expected in early April.

The mobile telephone equipment, to be placed in service initially on 22 trucks and a supervisor's car, is the first such installation in territory served by the Reading. It will utilize an exclusive frequency recently granted to the company by the Federal Communications Commission; and will extend to Allentown, Norristown, Pottsville, Harrisburg, Columbia and Lancaster.

Some of the immediate benefits expected from the system include speeding up pick-up and delivery of freight; enabling trucks to operate more efficiently; permitting scheduling of partial loads; allowing dispatcher to direct loading of trucks to allow through movement of freight from shipper to consignee without transfer; providing for re-routing of trucks in heavy traffic or in emergency; making it possible to notify drivers promptly of icy roads or other weather conditions throughout the area; and giving drivers a greater feeling of security in the knowledge that they can receive prompt assistance when required.

The **Missouri Pacific** has ordered from Motorola, Inc., radio equipment to be installed on 40 general purpose diesel locomotives.

The **St. Louis Southwestern** has ordered from Motorola, Inc., radio equipment to be installed on six diesel locomotives and two cabooses.

The **Southern** has ordered from Motorola, Inc., radio equipment to be installed on 20 diesel locomotives. It also has ordered 40 portable Handie-Talkie radio sets for use on cabooses.

The **Washington Terminal** has ordered from Motorola, Inc., radio equipment to be installed in one base station and on several diesel locomotives for use in switching service. This is the first radio equipment to be used by the WT.

Rates & Fares

Class Rate Equalization Effective in Canada

Removal of class rate "discrimination" as between Western and Eastern Canada became effective March 1. On that date, also, the Board of Transport Commissioners issued its reasons for its judgment of March 1, 1954, which made the equalized class rates effective (*Railway Age*, March 15, 1954, page 9). The board at that time announced that railways and shippers would be given a year's leeway in which to prepare for operation of the new rates.

An interim measure looking to final equalization was taken by the Transport Board early in October 1953, when it ordered a lowering of Western rates by 5%, and, to compensate the railways, permitted them to ad-

Briefly . . .

. . . An "Easter Festival" excursion plan, just announced by the Boston & Maine, permits travel to Boston from any point on the railroad, at special reduced fares, from March 13 through April 10. Tickets will be on a round-trip basis, with a three-day limit. Purpose of the plan, according to R. F. Cowan, B&M passenger traffic manager, "is to enable people in northern New England to enjoy the many special attractions that Boston offers during the Easter period."

vanage Eastern rates by 10% (*Railway Age*, October 12, 1953, page 12). The now-effective order of March 1, 1954, wipes out these temporary changes.

The board, in its published reasons, said statistics showed there had been a substantial increase in competitive-rated traffic and agreed charge traffic, which, it commented, "seems to indicate that a revolution in freight-rate making is occurring. It is abundantly evident it is no longer possible to maintain a railway rate structure based on the principle of monopoly, because the shipper of high-valued goods, such as class traffic, can now provide his own transportation or hire someone else to provide it, without using the railways, and therefore avoid paying the charges on remunerative traffic which the railways need to offset low rates on raw materials and other low-valued articles." At another point the board declared that it "cannot prescribe competitive rates but it must have regard for the level of rates to determine whether or not the level is

DAVIS OPPOSES "DEREGULATION"

"There is presently some sentiment for legislation to effect what has come to be termed 'deregulation,' meaning, at least in the minds of some of the 'deregulation' minded, the virtual stripping from the Interstate Commerce Commission of its control over rail freight rates—either maximum freight rates or minimum freight rates.

"There is some talk about proposed legislation which might permit railroads:

"To enter into contract rates:

"To name discount rates for volume shipments, i.e., multiple car or train-load shipments; and

"Other 'deregulation' measures.

"I think the practical result of those proposals, if enacted into law, would be to place shippers and receivers, and more particularly the larger, or volume, shippers and receivers, in a position, in effect, to call upon transportation agencies for 'competitive bids' for the handling of their traffic.

"That would cause a return to the chaotic days prior to the enactment

of the original Interstate Commerce Act in 1887.

"I am definitely not 'deregulation' minded, though do think there is room for improvement in the present regulatory structure without doing violence to its basic concept. . . .

"The observations which I have made from my present viewpoint, supplemented by very practical traffic department experience, convince me that the railroad industry has by no means reached the point where a 'policeman' is not needed. In fact, I think a 'policeman' is definitely needed, not only to shield the railroad industry from outside influences, but also to shield one railroad from another in dangerous rate cutting practices.

"I think . . . it would be a serious mistake to enact legislation which would permit railroads to operate without regulation in such areas as minimum rates, contract rates, etc., etc."—From an address to the New York Society of Security Analysts by C. McD. Davis, president, Atlantic Coast Line.

intrinsically too high for the value and cost of the service rendered to the public."

Maritime provinces rates are not affected by equalization, as they are determined and retained by statute at a level 20% below rates outside that region.

Commodity Rates — The board stated last week that it would begin hearings at an early date on the other part of the task of equalization, namely, commodity rates. Class rates affect about 20% of Canada's billion dollars' worth of annual rail freight traffic, while commodity rates affect a vastly greater proportion.

Law & Regulation

High Court Rules on Off-Hours Liability

The U. S. Supreme Court has ruled that a railroad is liable for protection of its employees while they are engaged in voluntary activities related to their jobs after working hours.

The high court last week overruled a Circuit Court of Appeals which had reversed a jury verdict for three Atlantic Coast Line employees in such a case. The ACL workers, en route, ironically, to a safety meeting, were struck by an automobile while waiting at a crossing at Jacksonboro, S.C., to meet a passenger train which was to stop specially to take them to the place of the meeting.

The auto was not owned by the railroad but suit was brought against the ACL under the Federal Employers Liability Act. Two of the men were injured, winning verdicts of \$1,500 and \$2,000, and the third man was killed, his widow being awarded \$4,166.

ICC Assignments

New assignments of members of the Interstate Commerce Commission to the commission's divisions became effective March 1.

They are as follows:

Division 1 — Commissioner Alldredge (chairman), Commission Chairman Mitchell, and Commissioner Clarke.

Division 2 — Commissioners Alldredge (chairman), Freas, and Winchell.

Division 3 — Commissioners Arpaia (chairman), Clarke, and Freas.

Division 4 — Commissioners Johnson (chairman), Elliott, and Tuggle.

Division 5 — Commissioners Cross (chairman), Tuggle, and Hutchinson.

The commission's Committee on Legislation and Rules has been supplanted by separate committees on Legislation and on Rules. Members of the former will be Chairman Mitchell and Commissioners Freas and Clarke. Membership of the Committee on Rules will be announced later.

Abandonments

Authorizations

CHICAGO, BURLINGTON & QUINCY.—To abandon a 13-mile segment of its line from Billbey Switch, Mo., to the end of the line at Claremont.

COLORADO & SOUTHERN.—To abandon its 4.9-mile Berwind branch, from Ludlow, Colo., to Bear Canon.

GULF, MOBILE & OHIO.—To abandon operation under trackage rights over 7.5 miles of the New Orleans Terminal from Terminal Junction to the old Canal Street passenger station. The trackage provided the GM&O access for its "Little Rebel" passenger trains into New Orleans, but the service was discontinued March 8 without authorization in anticipation of the abandonment of the Canal Street Station. Operation between Slidell, La., and New Orleans was also discontinued March 8.

NORTHERN PACIFIC.—To abandon operation over 0.55 miles of the Oregon Short Line at the Tramway Mine of the Anaconda Copper Company at Butte, Mont. The segment itself is also to be abandoned by the Short Line.

Financial

Alleghany Corporation Retains Carrier Status

The Interstate Commerce Commission has ruled that the Alleghany Corporation should retain its carrier status and remain subject to the Interstate Commerce Act.

In thus sanctioning Alleghany's control of New York Central, the commission took occasion to say the holding company will be required to deposit with a trustee any Missouri Pacific voting stock it may obtain when the road is reorganized (*Railway Age*, March 7, page 48). The commission also said that any interlocking directorships, not presently authorized, between Alleghany and Central should be brought to the attention of the commission "for consideration and approval."

SEC Setback — The commission's determination gave Alleghany the status it wanted, meanwhile rejecting the Securities & Exchange Commission's contention that it should have jurisdic-

tion over the holding company. The ICC report, in Finance Docket No. 18656, embodied an unanimous decision by Division 4.

The case involved an application for authority to merge the properties of the Louisville & Jeffersonville Bridge & Railroad Co. into the Cleveland, Cincinnati, Chicago & St. Louis. Alleghany and Central were parties to the application, seeking authority to acquire control of Jeffersonville properties by virtue of their control of the Big Four. The commission approved the merger transaction.

Alleghany's carrier status was acquired in 1945 under a commission order which sanctioned its control of Chesapeake & Ohio. That determination was made in a case like the present proceeding. It involved C&O's acquisition of the properties of the Norfolk Terminal & Transportation Co. As part of its successful campaign for control of Central, Alleghany relinquished control of C&O.

SEC contended that Alleghany was an "investment company," which should be subject to the Investment Company Act. It appeared to the ICC, as the report put it, that SEC was "primarily interested in achieving some degree of alteration of the effect of certain provisions" of that act and the IC Act. This, the report added, was something that would have to be put up to Congress.

The Important Thing—"We recognize," the report continued, "that the present control of the Central system has passed to Alleghany by regular corporate procedures even though our approval in the premises has not been sought. Accordingly, its influence on the national transportation system which we regulate is immediate in effect and wide in scope. We do not think that we should deprive ourselves of information necessary to the regulatory process and of value to the public generally with respect to a concern playing such an important role in transportation."

"In our opinion, the diversification of Alleghany's holdings as between railroad and non-railroad or non-controlled railroad securities is not of substantial (Continued on page 83)

FAST WORK.—During a 10-min layover of the "Challenger" at Omaha recently, Horace B. Northcott (pen in hand), general advertising manager of the Union Pacific, hopped aboard and signed a television contract. Details of the contract—to sponsor a 30-min film show, "His Honor, Homer Bell," in Seattle, Portland, Los Angeles and Omaha—had been worked out earlier with D. M. Curtis (right center), of the National Broadcasting Company film division. Mr. Curtis was en route from the West Coast to Chicago.

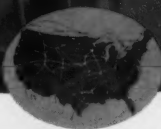




PS-2

covered hopper cars

BUILT TO SERVE



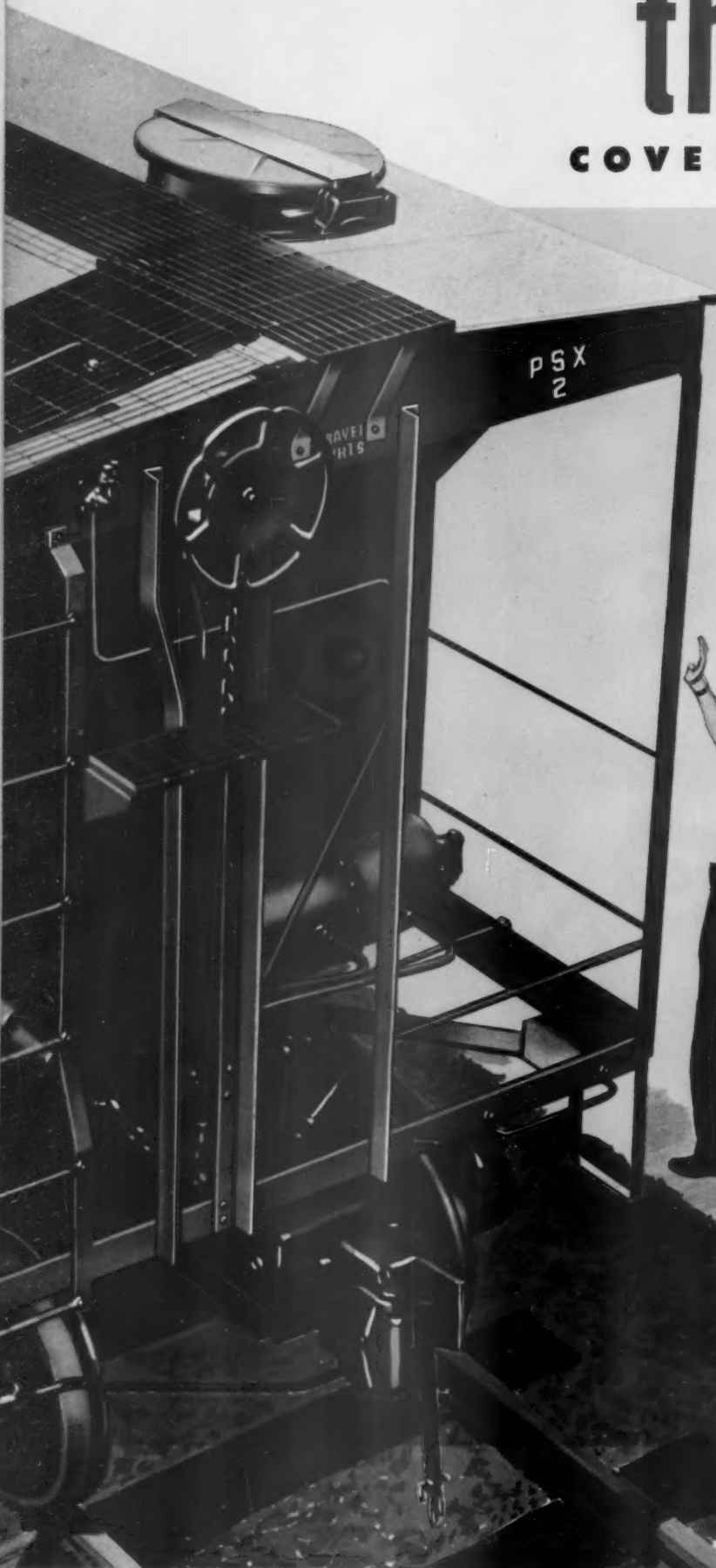
BEST ON THE

GREAT AMERICAN RAILWAY
System

BY PULLMAN-STANDARD

the PS-2

COVERED HOPPER CAR



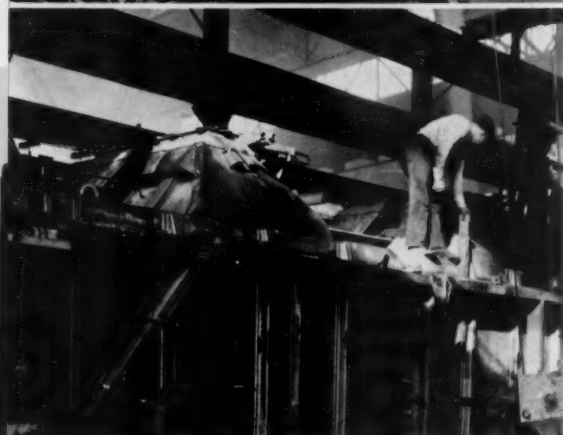
The PS-2 Covered Hopper Car carries bulk commodities safe and dry from shipper to consignee no matter how far apart they are on the Great American Railway System. And the

PS-2 is built to allow easier, safer, more economical cleaning, loading, unloading and maintenance with greater speed. Its longer in-service life and flexible standardization provide better lading protection and point the way to economical new avenues of railroad revenue.

A special new circular hatch is coupled with Pullman-Standard precision fabrication to help keep out weather and dirt. And the new hatch arrangement means much safer conditions for workmen. As are all Pullman-Standard freight cars, the PS-2 is engineered for long in-service use with minimum maintenance.

PS-2 components work together to create designed-for strength that is vastly better than costly bulk alone.

And as are other PS freight cars, PS-2s are precision fabricated by advanced methods using production line techniques with costly jigs, fixtures and dies. Buyers of PS-2 Covered Hopper Cars receive full value through outstanding performance, minimum maintenance, major production-run economies. And they benefit from the kind of shipper-consignee preference that has already been indicated by the fact that, of the PS-2s now in service, over 2045 have been bought by seventeen railroads. Such individual usage verifies Pullman-Standard beliefs in the superiority of the PS-2 Covered Hopper Car.



PS-2 Covered Hopper Cars are available in three sizes . . . 2003, 2893 and 3132 cubic feet.

No matter which of the three sizes is selected, buyers are assured the features, durability and economy that are characteristic of all PS rolling stock. The standardized PS-2 includes continuous Research and Development (left, top) which submits cars and manufacturing processes to continuous tests and studies impossible for limited production cars.

PS multiphase production is important, too. Modern production methods (left, center) concentrate the specialized skills of highly trained craftsmen on segments of PS-2s as they pass from position-to-position during fabrication. Such multiphase production provides precision building at low cost.

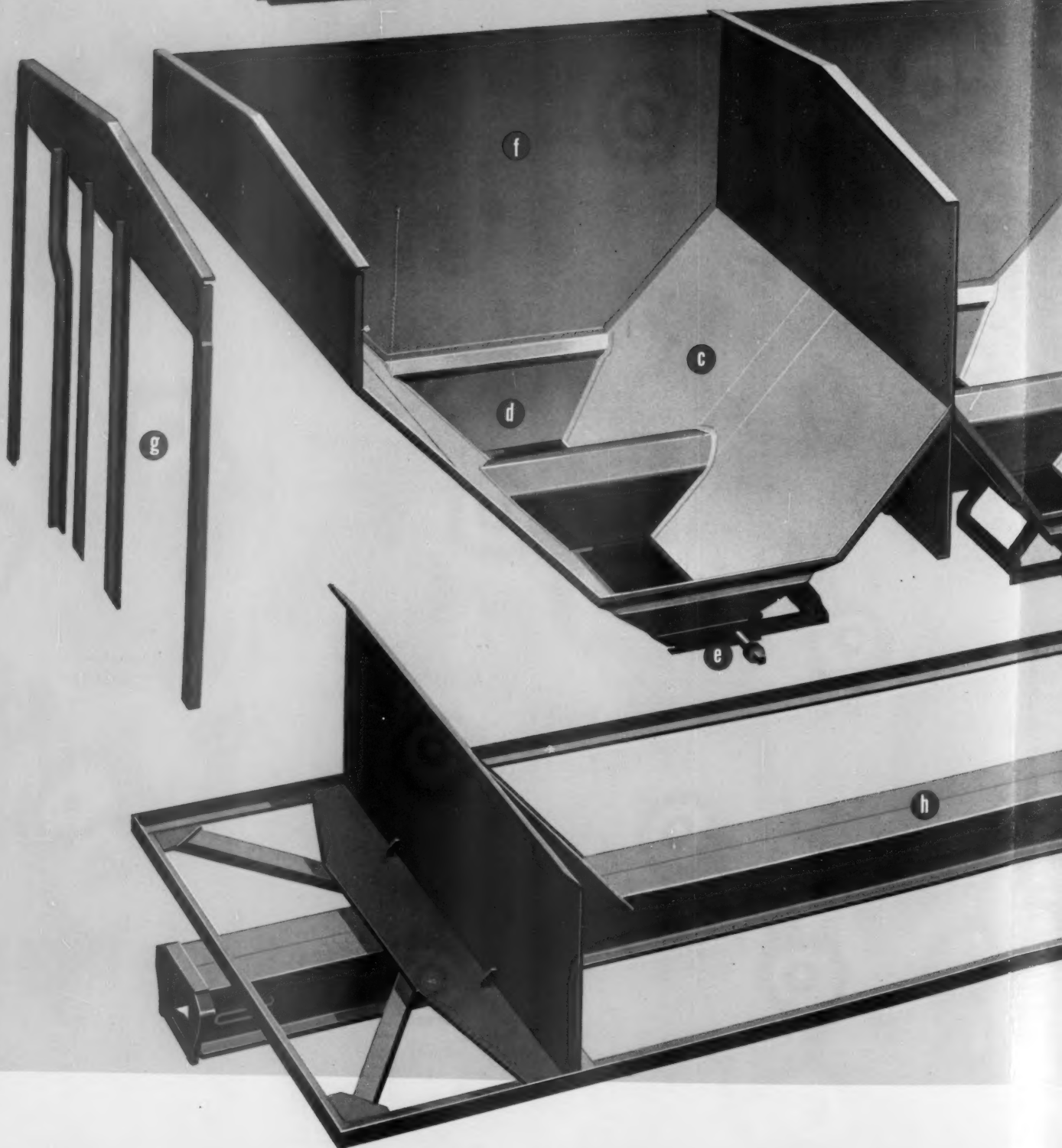
And PS-2s are followed into the field for documented verification of their performance by Sales and Service Engineers. Inspections are made under actual operating conditions (left, bottom) and weaknesses or advantages reported to Pullman-Standard for consideration in future PS-2 Covered Hopper Cars.

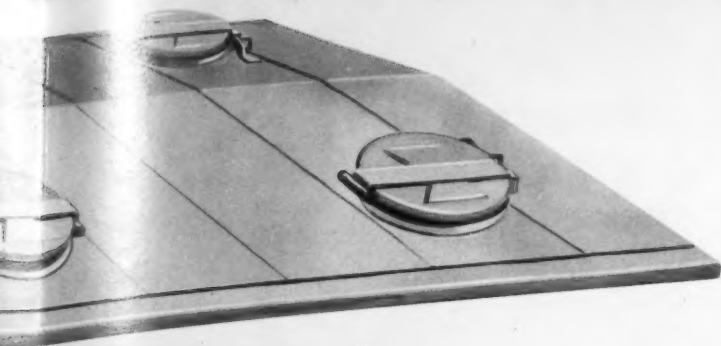
The success of the principle of standardization is demonstrated, individually and as a group, by the PS-2 Covered Hopper Cars serving The Great American Railway System.

2045 PS-2S TO 17 RAILROADS*



*Plus 166 PS-2s to FOUR other USERS as of February 1, 1955





a THE PS-2 ROOF. Built up of roof sheets and carlines, the PS-2 roof can accommodate any number of hatches, wherever specified. Roof breakage is eliminated by use of new circular hatches. The roof is smooth, and has bulb angle side plates that eliminate catch-all ledge.

b THE PS-2 HATCH AND HATCH COVER. New circular hatches and covers prevent weather from being trapped against hatch sides, and forced up under covers, into lading. $6\frac{1}{2}$ " hatch combings facilitate roof cleaning. Hatch placement, and covers that open along the car's longitudinal axis, contribute to easy operation and worker safety. Hatch covers lock with special center pressure locking points that seal covers individually. Hinges are especially rugged, while latches are positive but easily reached and operated.

c THE PS-2 FLOOR SHEETS. Sloping floor sheets are of a $5/16$ " plate joined with longitudinal welds. Positioned for maximum capacity plus high speed unloading, floor sheets, as throughout the entire PS-2 interiors, contain no structural pockets or material retaining ledges or laps.

d THE PS-2 HOPPER SHEETS. Of $3/8$ " plate for outside sheets and $5/16$ " plate for inside sheets, these units are designed to facilitate unloading and withstand abrasive action and sledge-hammer blows. Like such other components as end plates, side sheets, end posts and corner posts, hopper sheets are readily available and properly designed for long service.

e THE PS-2 HOPPER GATES. Unloading gates are of standard design and construction. Hopper gates and chutes fit existing unloading accommodations. Location of chutes and gates within the rails permits easy, fast unloading of most granular materials into standard conveyors.

f THE PS-2 SIDE. Side has 4" bulb angle overhang at roof edge which keeps sides cleaner, lengthens paint life. The side sill is turned in to eliminate material retaining ledge. Sides are welded, eliminating possibility of corrosion and leakage around rivet holes. Heavier side sheets reduce unloading damage from sledging.

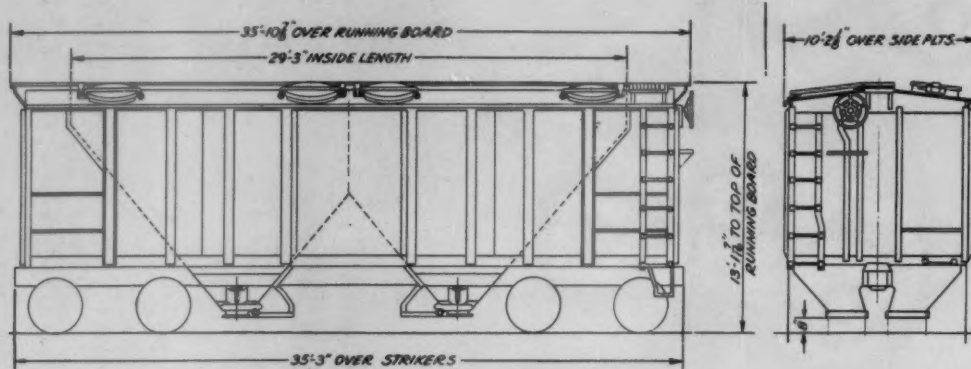
g THE PS-2 END. Ends are formed of a one-piece pressed $3/16$ " plate. They are designed for easier cleaning and painting, while safety is considered in the simplified ladder and step.

h THE PS-2 UNDERFRAME. PS-2 underframe components such as center, side and end sills, diagonal braces, body bolsters, strikers and front draft lugs are specially designed and tested for maximum strength under all types of lading and service conditions. All components are readily available and are easily maintained or replaced.

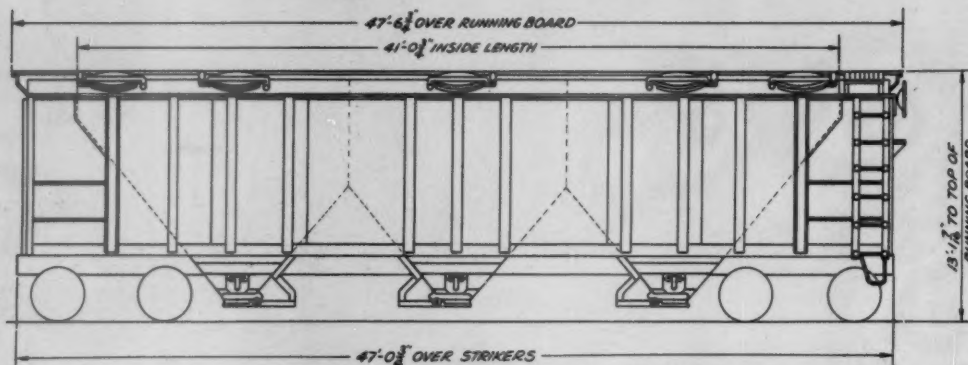


PANY

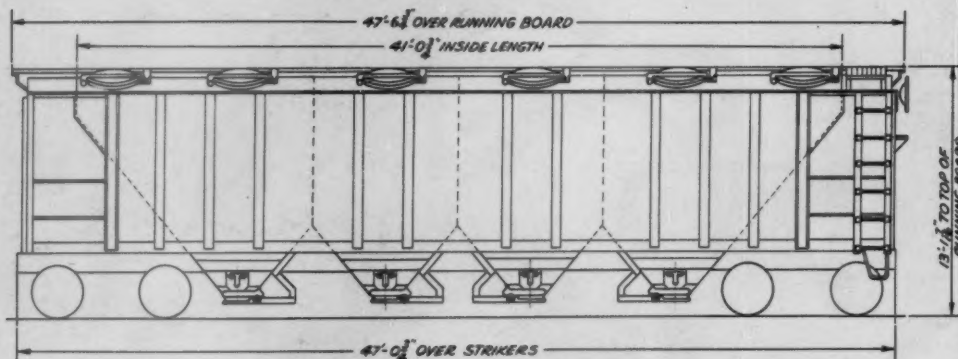
3 PS-2 Covered Hopper Car sizes offer capacity variations



The 2 hopper PS-2 2003 Cubic Feet



The 3 hopper PS-2 2893 Cubic Feet



The 4 hopper PS-2 3132 Cubic Feet

YOUR NEEDS CREATE THE PULLMAN "STANDARD"

PULLMAN - STANDARD

CAR MANUFACTURING COMPANY

SUBSIDIARY OF PULLMAN INCORPORATED

79 EAST ADAMS STREET, CHICAGO 3, ILLINOIS

BIRMINGHAM, PITTSBURGH, NEW YORK, SAN FRANCISCO, WASHINGTON



on
time tables...

Depend on good lubrication. And with
the expanded use of low cost fuels, good
lubrication is more important than ever.

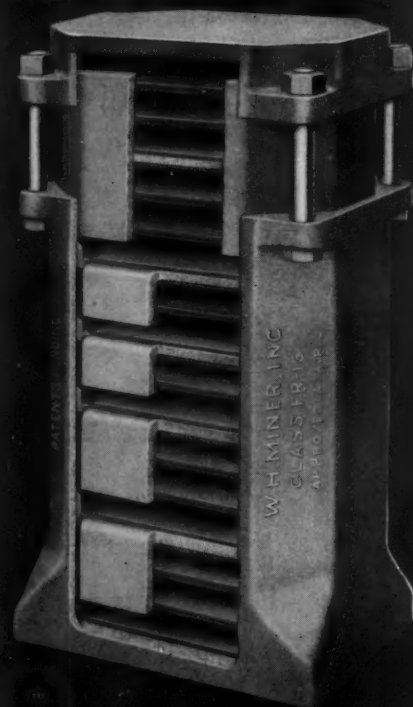
STANDARD OIL COMPANY (Indiana)



THESE ARE JUST 12 OF 140 RAILROADS SERVED BY STANDARD OIL COMPANY

MINER

INTRODUCES THE



Each unit contains 1500 psi unit of patented construction. The bonding of the two metal plates is made by the use of a special process which produces a strong, uniform bond. This process is the result of a special process which produces a strong, uniform bond. This process is the result of a special process which produces a strong, uniform bond.

FR-16 RUBBER DRAFT GEAR THE WORLD'S BEST WITH

INEXHAUSTIBLE ENDURANCE

The FR-16 Rubber Draft Gear has been scientifically engineered to meet the most severe service on American railroads. From A.A.R. laboratory data we are pleased to announce a capacity of 39,400 foot pounds for this new gear at 2¾ inches travel. At one-half travel, 25 per cent of the work is accomplished, thereby providing full-time protection for lading, car and attachments for present and future requirements. These results are realized with a maximum sill pressure of 475,000 pounds. Ample initial compression with instantaneous response to car impacts eliminates slack or time lapse, and provides continuing restraint of the coupler, restricting its movement through the zone of high pressures and destruction. The only rubber gear fully enclosed. Requires no special tools or effort to install.

MAXIMUM PROTECTION AT EVERY FRACTION OF TRAVEL

WILSON, JENNER, INC. CHICAGO

**MECHANIZED
TRACK MAINTENANCE**
at its finest!



Investigate
**THE EXTRAORDINARY
SAVINGS**
of this Maintenance
Combination

Each of the machines shown here is recognized as the most efficient and economical means of doing its job. When used in combinations of two or more machines, R.M.C. Equipment provides even greater savings in track maintenance costs.

See the R. M. C. Machines at the
N.R.A.A. Exhibit • Booths Number
95, 96, 96-A, 115, 116, 116-A.

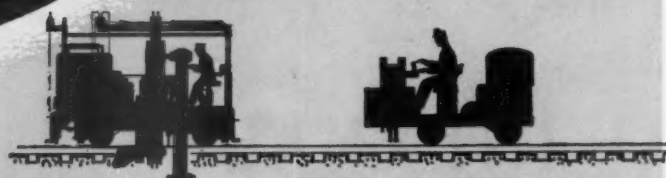
Railway Maintenance Corporation

BOX 1888

PITTSBURGH 30, PA.



R.M.C. TIEMASTER replaces ties at $\frac{1}{4}$ the cost of other methods, with minimum disturbance to the bed.



1. R.M.C. TieMaster removing old ties and inserting new ones at a rate of one per minute.

2. R.M.C. SpikeMaster nipping up the ties and driving four spikes.



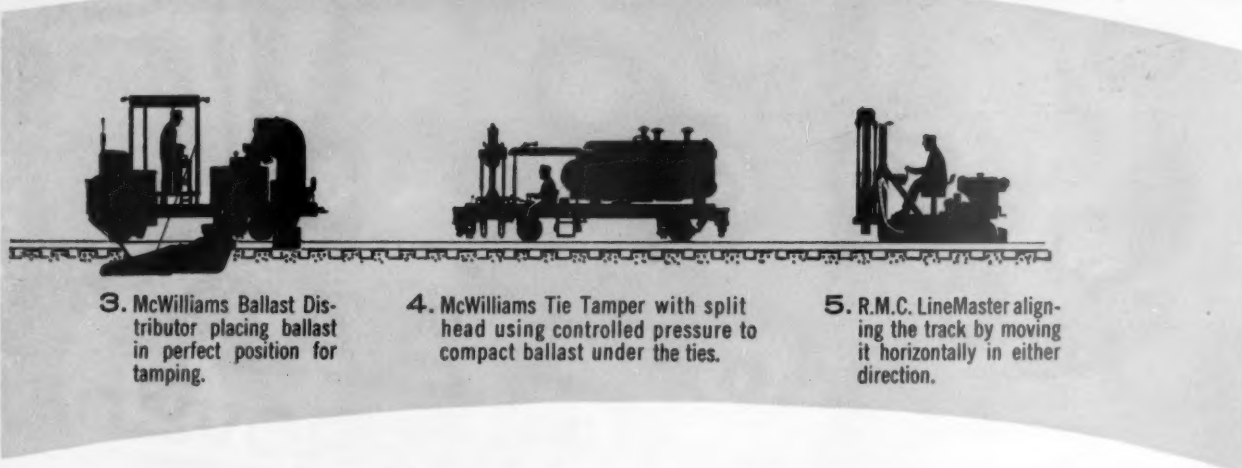
McWILLIAMS TIE TAMPER finish tamps any raise up to 6" at speeds up to 720 feet per hour.



R.M.C. SPIKEMASTER spikes ties tightly against the rails, at a rate of better than two ties per minute.



McWILLIAMS BALLAST DISTRIBUTOR places ballast in desired quantity and depth in exactly the proper position for tamping.

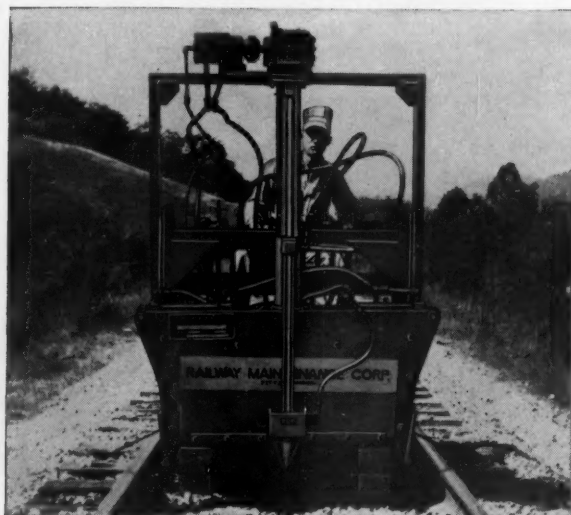


3. McWilliams Ballast Distributor placing ballast in perfect position for tamping.

4. McWilliams Tie Tamper with split head using controlled pressure to compact ballast under the ties.

5. R.M.C. LineMaster aligning the track by moving it horizontally in either direction.

R.M.C. LINEMASTER lines over 6,000 feet of track per day, using an operator and one man sighting.



McWILLIAMS SUPER MOLE cleans or excavates shoulder ballast, operating at speeds up to 2400 feet per hour.



It's **NEW.**

SINCLAIR LITHIUM

ROLLER BEARING

New — but already proven by hundreds of thousands of miles of service to be outstanding for car and locomotive roller bearing lubrication.

Sinclair Lithium "RB" Grease is a uniform smooth grease having superior mechanical stability.

Sinclair Lithium "RB" Grease has excellent resistance to oxidation and is non-corrosive to bronze and other bearing materials.

Sturdy Sinclair Lithium "RB" Grease flows readily at low operating temperatures yet will not thin out at high operating temperatures or under heavy loads.



SINCLAIR RAILROAD LUBRICANTS

Sinclair Refining Company, Railway Sales, New York • Chicago • St. Louis • Houston



GREASE



BALLAST REGULATOR, SCARIFIER & PLOW

Does Work Of 10 To 30 Men—Monthly Rental \$350

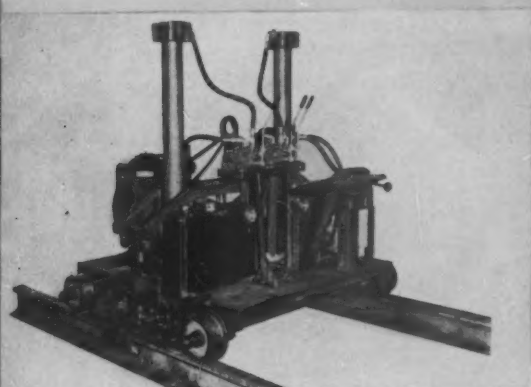
Used for 14 different operations in ballast scarifying, cleaning, rebal-
lasting, resurfacing, retimbering and maintenance of ballast shoulder.



JACKALL

Does Work Of 4 Men—Monthly Rental \$277

Used in track surfacing gangs. Takes place of all hand jacks normally
used in raising track.



HYDRAULIC JACKS

Does Work Of 4 Men—Monthly Rental \$129

Used for raising track in resurfacing programs.



TIE REPLACER

Does Work Of 8 Men—Monthly Rental \$250

Used for pulling out old ties and inserting new ties.



TRACK CRANE

Does Work Of 6 Men—Monthly Rental \$129

Used for redistributing new ties for replacement, picking up
old ties and with bridge gangs.

Kershaw

TESTED, PROVEN AND PURCH

THREE PLANS

All Kershaw machines are
available under any one of
the following three plans:

1 Three Year Lease—
Lease Kershaw ma-
chines for three years.
All rentals shown on
these pages are based
on this plan.

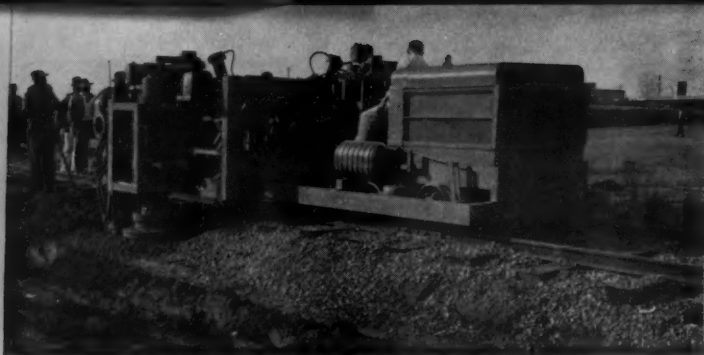
2 Six to 12 Months Rent-
al With Option To Pur-
chase—Lease a Ker-
shaw machine for six to
12 months. Any time
during that period you
may purchase the ma-
chine with 90 per cent
of rentals applying to
the purchase price.

3 Outright Purchase.

Atlanta & St. Andrews Bay
**Atchison, Topeka & Santa Fe
**Atlantic Coast Line
Bessemer & Lake Erie
*Boston & Maine
**Estra de Ferro Central do Brazil
**Chesapeake & Ohio
*Canadian Pacific
****Canadian National
***Central Of Georgia
Chicago & Eastern Illinois
Chicago Great Western
Cinchfield
*Chicago, Rock Island & Pacific
Con. R. R. of Cuba
Chicago, Milwaukee, St. Paul & Pacific
Chicago & North Western
Carolina & North Western
Delaware & Hudson
*Delaware, Lackawanna & Western
Detroit & Macinac
Duluth, South Shore & Atlantic
*Gulf, Mobile & Ohio
*Interstate
*Lehigh Valley
**Louisville & Nashville
***Nashville, Chattanooga & St. Louis
*New York, New Haven & Hartford
****Pennsylvania
*Reading
*****Southern
*Texas & Pacific
*Toledo, Peoria & Western
*Texas & New Orleans
*St. Louis and San Francisco
*Wabash
Western Maryland
***Illinois Central
Chicago, Indianapolis & Louisville

RECOGNIZE THIS SYMBOL OF LEA

**HAVE YOU INVESTIGATED
KERSHAW TRY and BUY**



UNDERCUTTER AND SKELETONIZER

Does Work Of 50 Men—Monthly Rental \$1,100

Used for skeletonizing when track is raised and as undercutter to lower existing track.



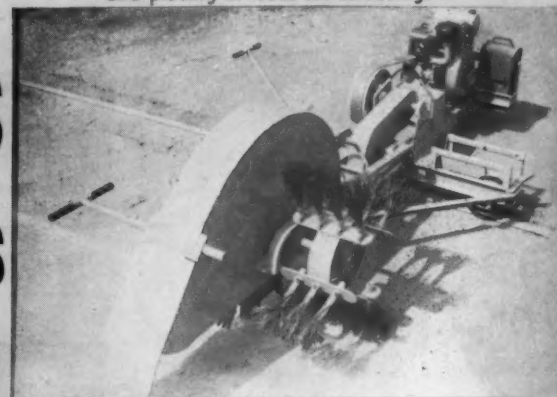
BALLAST CLEANER & DISTRIBUTOR

Does Work Of 30 Men—Monthly Rental \$1,100

Used for cleaning ballast removed by Undercutter, cleaning shoulder ballast, and for picking up ballast from shoulder and placing in track for surfacing.

TRACKWORK MACHINES USED BY THESE RAILROADS

- *Norfolk & Western
- *Seaboard
- Florida East Coast
- IGN & GCL
- *Atlanta & West Point
- Chicago, Burlington & Quincy
- *Richmond, Fredericksburg & Potomac
- Genesee & Wyoming
- Delaware & Hudson
- Central Vermont
- Lehigh & Hudson River
- Fernwood, Columbia & Gulf
- Bangor & Aroostook
- ****Northern Pacific
- *Missouri-Pacific
- *Southern Pacific
- Bailes-Sey Contractors
- Ferguson & Edmondson
- L. E. Pilot Co.
- *W. H. Nichols Co.
- *Phelps-Dodge Corp.
- Royce Kershaw Co., Inc.
- *T. F. Scholes, Inc.
- *Wm. A. Smith Construction Co.
- A. S. Wickstrom Construction Co.
- *United Plastics, Ltd.
- Woodward Iron Co.
- *Corps of Engineers, U. S. Army
- Kennecott Copper Corp.
- *Mannix Ltd.
- San Manuel Copper Co.



KRIBBER

Does Work Of 10 Men—Monthly Rental \$66

Used to crib between ties ahead of adzgers; also for skeletonizing track.

SEE
Kershaw Machines
on display at
BOOTHS 21-S
through **28-S**
at the
Coliseum
South Hall
during the
National Railway
Appliance Association Exhibit
at the
A. R. E. A.
Convention
In Chicago



TIE BED CLEANER

Does Work Of 4 Men—Monthly Rental \$200

Used for scarifying and cleaning tie bed and for skeletonizing track.



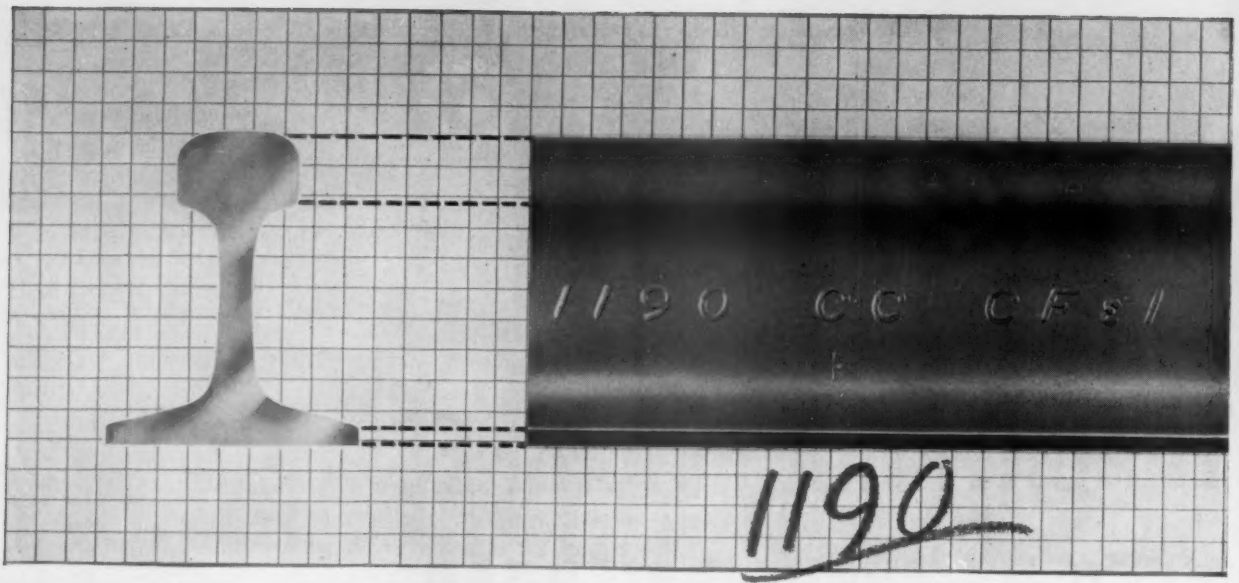
TRACK BROOM

Does Work Of 10 To 15 Men—Monthly Rental \$275
Sweeps cinders, slag, stone, ore and other car drippings onto conveyor, or places between track for loading into car or trucks. Also used to remove loose ballast between rail

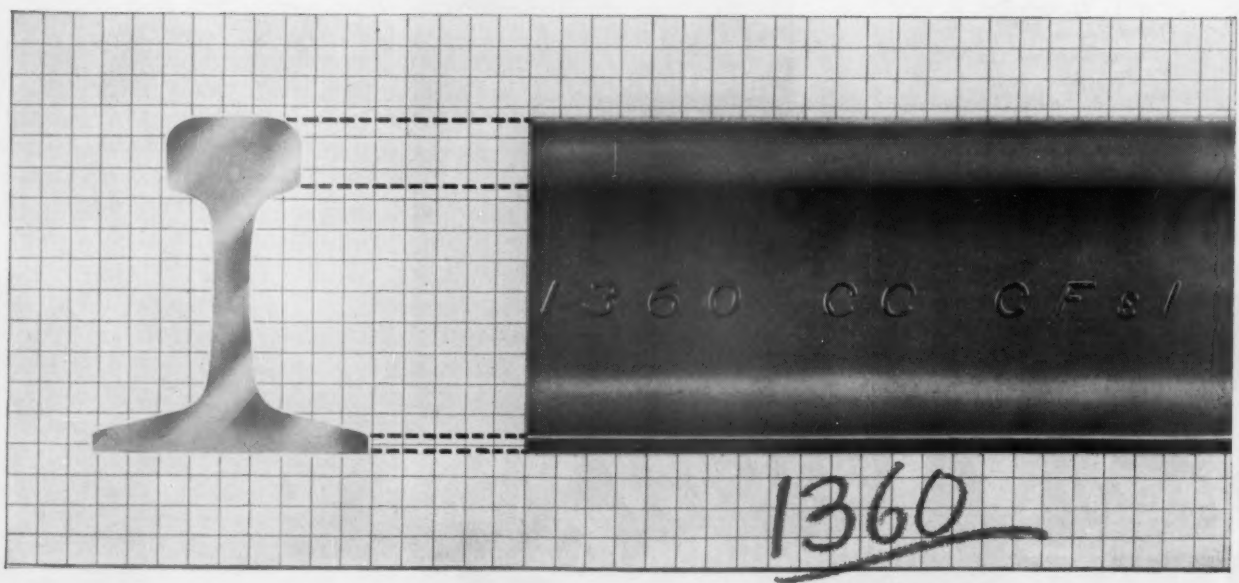
DEERSHIP
THE
PLAN?
KERSHAW
MANUFACTURING CO. INC.
MONTGOMERY, ALABAMA




- *2 to 5 Machines
- **6 to 10 Machines
- ***11 to 20 Machines
- ****21 to 30 Machines
- *****31 to 40 Machines
- *****41 to 50 Machines



PROG





Since 1882...

Pioneering together, CF&I cherishes its continued association and cooperation for three-quarters of a century with Western and Transcontinental railroads. The momentous change in this vast Western Empire, from a land of untapped riches to the thriving agricultural and industrial region it is today, is a lasting tribute to this ever-expanding transportation system.

Past achievements of CF&I and Western Railroads have been a constant inspiration toward greater accomplishments, continuous development and dependable service.

RESS



Nos. 1190 and 1360...

Keeping pace with the imperative demands for a stronger, smoother, safer track structure, CF&I has produced these new rail sections which are now offered to Western Railroads. These designs embody a novel combination of effective fundamental features approved and accepted by prominent Western Railroad Engineers. Detailed information furnished on request.

3050

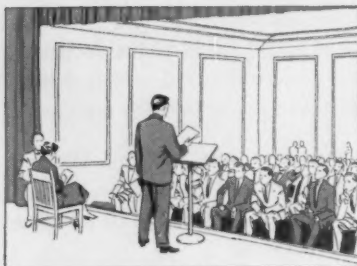


THE COLORADO FUEL AND IRON CORPORATION
DENVER, COLORADO



TO SHIPPERS

... this stencil is one more sign of railroad progress



The availability of freight cars is of great concern to both railroads and shippers. As Shippers' Advisory Boards point out, most car rejections are the result of inadequate car flooring.



While steel found more and more uses in freight car design over the years, wood floors with their *nailability* were essential to the security of finished freight, so they remained in use.



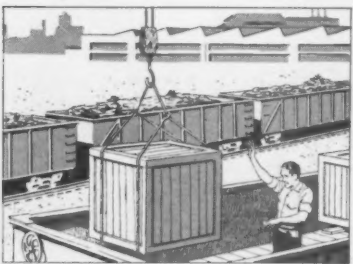
Railroads attempt to keep floors in good condition. But they face rising labor costs and loss of revenue during repairs. The positive solution: N-S-F—NAILABLE STEEL FLOORING.



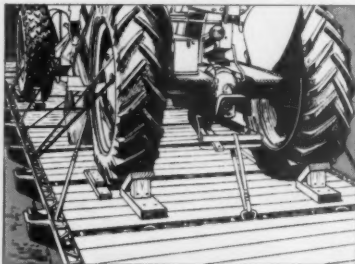
With its unique nailing groove, NAILABLE STEEL FLOORING takes ordinary nails—clinches them firmly in place. This makes it possible to block finished freight by standard methods.



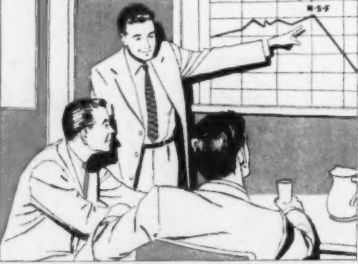
At the same time, N-S-F eliminates break-through of mechanical loading devices. And—like no other car floor—it adds strength at critical points of the car structure.



In gondolas, NAILABLE STEEL FLOORING improves car supply and reduces operating costs. It carries rough freight one way—is available to carry blocked finished freight on the return trip.



For flatcars, N-S-F offers improved load security. Tie-down straps or wires can be fastened to Multi-Position Holddown Fixtures supplemented by regular blocking nailed to the floor.



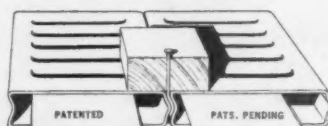
Records show that maintenance and operating costs drop sharply when N-S-F is applied. It soon recovers its higher initial cost, then begins to pay dividends on the investment.

COMPLETE engineering and cost data available from Great Lakes Steel Corporation, Steel Floor Division, Ecorse, Detroit 29, Michigan. Sales representatives in Chicago, Philadelphia, St. Louis, Atlanta, Omaha, Denver, San Francisco, Montreal, and New York.

GREAT LAKES STEEL CORPORATION

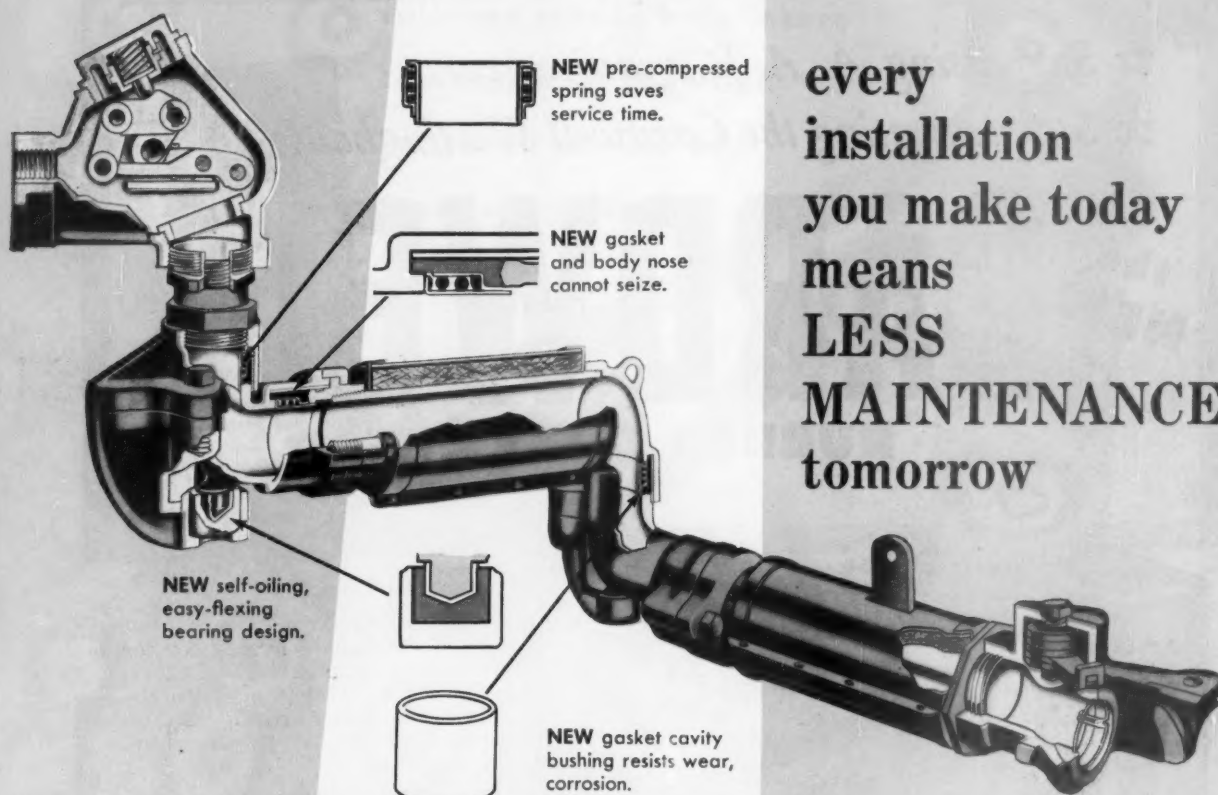


51-SF-4



N-S-F is made of low alloy N-A-X HIGH-TENSILE steel—remarkably strong, corrosion-resistant—formed into channels, and welded together to form a unique nailing groove. Nails are clinched in a tight grip of steel, yet can be readily removed.

**NAILABLE STEEL FLOORING
PAVES THE WAY TO THE ALL-STEEL FREIGHT CAR**



every
installation
you make today
means
**LESS
MAINTENANCE**
tomorrow

new **STEAM-LIFE** flexible conduit

Vapor improvements cut at-the-car servicing 90% to save maintenance money for railroads, to keep rolling stock rolling profitably.

New Steam-Life Conduit stays right on the car. The only on-line attention ever required is occasional replacement of gaskets that slip readily in place—a simple one-man job. And spare gaskets are the only replacements that need be stocked at way-points. At-the-car servicing is so quick and easy it's sure to be done . . . and done right.

With its new self-lubricating features and balanced resistance to wear and abrasion, Steam-Life Flexible Conduit also can be included in economical preventive maintenance programs for important additional savings.

Flexible, cushioned construction absorbs stresses of track curves and vibration. Full-length, full-area, streamlined steam passage eliminates flow-restricting eddies and excessive pressure drop. It holds a tight seal longer, yet, even under full steam pressure, Steam-Life has complete freedom of movement.

Specify this improved metal conduit for all 2" and 2½" lines. There are lengths and suspensions for all car and locomotive installation requirements. We'll be glad to send you Steam-Life Bulletin 591.

VAPOR

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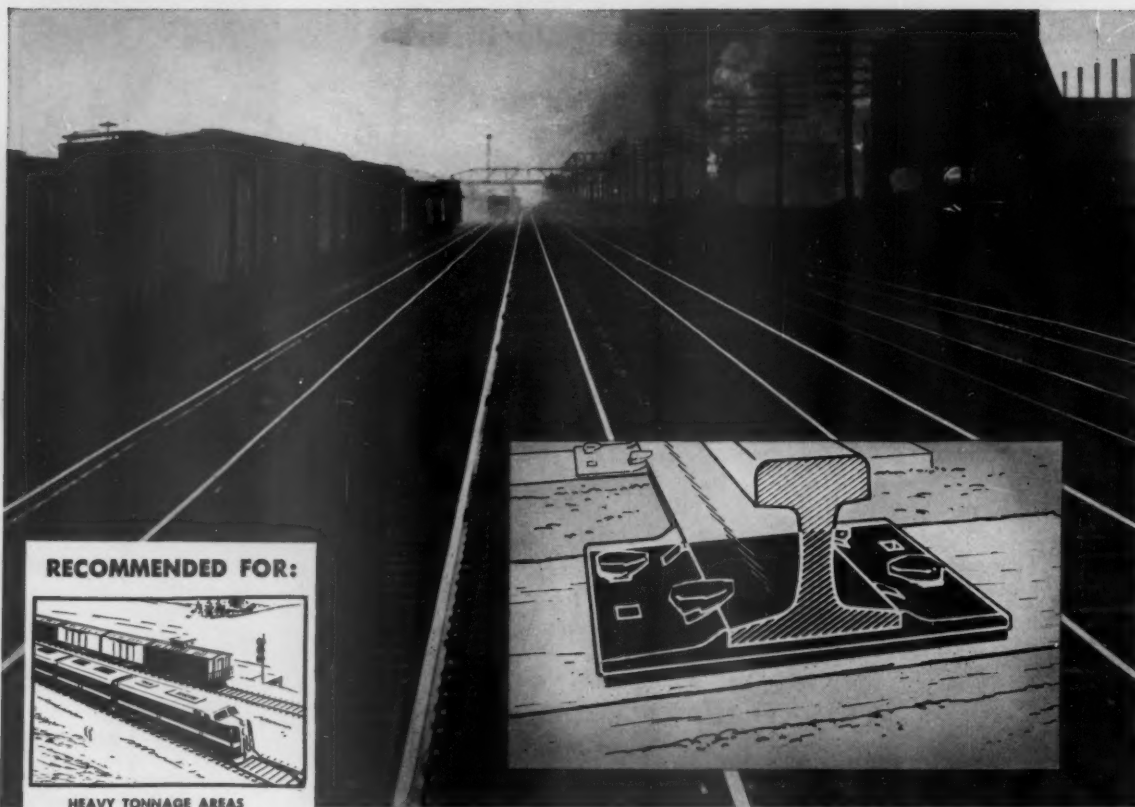
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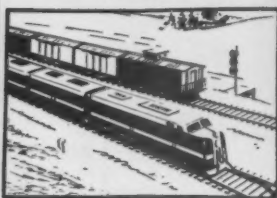
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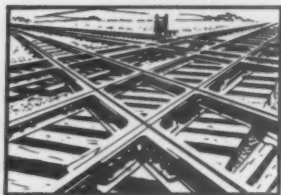
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NMB Sealed

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Eliminates 81.4%* of all hot boxes

and 100% of hot boxes due to waste packing.

- **GREATLY REDUCES** operating costs, eliminates virtually all accidents due to hot boxes.
- **PROVIDES** a modern scientific system of lubrication and dirt exclusion for solid bearing journal boxes.
- **SIMPLE**, inexpensive installation. Requires no change in present journal boxes.

Over three years ago, NMB research engineers began the search for a solution to railroad car hot boxes. Our 33 years of sealing experience indicated an answer could be achieved by eliminating waste packing and sealing the solid bearing journal box so the journal and bearing could operate in a constant lubricant bath.

First came development of a shaft seal to retain lubricant and exclude water, dirt and brine from the rear of the journal box. To insure complete sealing and trouble-free operation, other parts were needed and were developed. These parts comprise the NMB Sealed Journal Box Kit. The Kit may be installed in any standard solid bearing journal box quickly, without alteration.

Performance has been truly remarkable. Experience shows the Kit can produce operating and maintenance savings of at least \$6.88 per 1,000 car miles; an average of \$116.96 per car per year.

NMB Kits have been tested continuously under all operating and weather conditions for the past three years. Initially, extensive tests were conducted on Union Pacific cars under supervision of Mr. David S. Neuhart, General Superintendent, Motive Power and Machinery, Union Pacific, and Chairman of the Mechanical Division, A.A.R., in collaboration with Mr. Lloyd A. Johnson, President of National Motor Bearing. Subsequently, tests were also conducted by the Southern Pacific under supervision of Mr. B. M. Brown, General Superintendent of Motive Power, and by the Western Pacific under supervision of Mr. E. T. Cuyler, Chief Mechanical Officer.

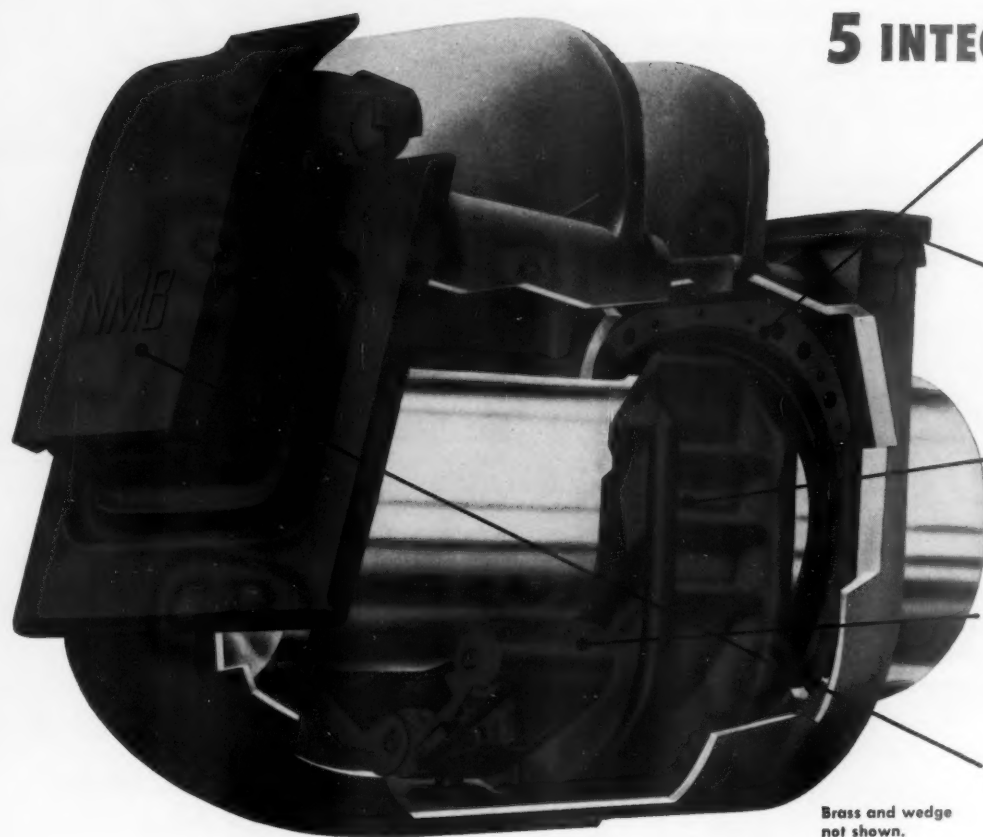
Today all three railroads have placed production orders for thousands of NMB Sealed Journal Box Kits. The railroads are installing Kits on box cars, piggy-back flats, and other cars where exceptional operating dependability is desired.



INTERCHANGE SERVICE ON 10,000 FREIGHT CARS

Journal Box Kit

5 INTEGRATED PARTS



A. OIL SEAL

Seals lubricant in, seals dust, dirt, water, brine and snow out.

B. DUST GUARD WELL COVER AND FILTER

Excludes dripping water, snow and brine, yet permits breathing of sealed box.

C. JOURNAL GUARD BEARINGS

Cushions journal box assembly against coupling, starting and braking shocks.

D. OIL CIRCULATOR

Constantly delivers large volume of oil to bearings; bearings and journal run 50° cooler.

E. JOURNAL BOX LID

Pressure-tight seal keeps oil in, dirt and water out.

Brass and wedge not shown.

Besides the NMB Kit for solid bearing freight cars, National has made thousands of oil seals for roller bearing railway cars, and over a billion oil seals for America's CARS • TRUCKS • TRACTORS • AIRCRAFT • MACHINES • APPLIANCES



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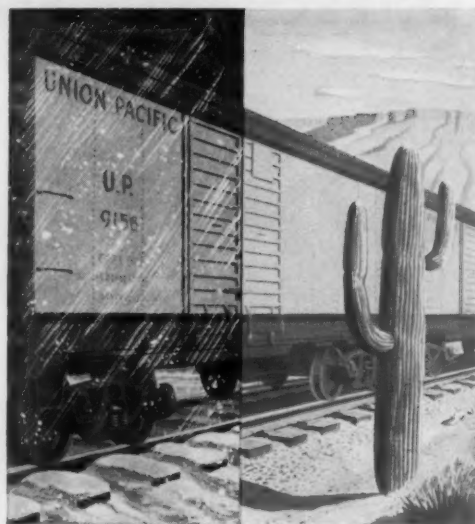
*Based on operating statistics of major Class 1 railroads.

READ MORE ABOUT KIT

NMB KIT proved in over 7,000,000 journal box miles

A. A. R. APPROVED FOR INTERCHANGE SERVICE ON 10,000 CARS

In Union Pacific, Southern Pacific and Western Pacific cars, the NMB Kit has now accumulated over 7,000,000 journal box miles under the most demanding operating conditions. Operation is so dependable journal boxes equipped with the Kit are inspected only once each 30 days! Railroad mechanical engineers and motive power superintendents say the following are some of the benefits railroads will realize from NMB Kits:



FAST, SIMPLE INSTALLATION without journal box alteration



1. Journal box is thoroughly cleaned. Locating washer for oil circulator is welded to bottom of box.



2. NMB Oil Seals are placed in dust guard well and side frame is pushed into position on the journals.



3. One guard bearing is inserted on each side of axle, with rubber bearing surface facing axle.



4. After mesh filter is placed in dust guard slot, dust slot cover is snapped into place.



5. Oil circulator is placed in position, and its pedestal installed through opening in locating washer.



6. Installation of NMB journal box lid is quick, simple, actually easier than conventional lids.

ELIMINATE MOST HOT BOXES An estimated 81.4%* of hot boxes are caused by waste packing, poor lubrication, or related causes. No waste packing is used in journal boxes equipped with NMB Kits. **ALL HOT-BOXES CAUSED BY WASTE ARE ELIMINATED.**

ELIMINATE REPACKING An annual saving averaging \$17.10 per freight car per year.

90% LESS LUBRICATING OIL A major Western railroad spends \$317,000.00 annually for journal box lubricating oil. Cars equipped with the NMB Kit use only 10% of normal oil requirement.

90% LESS INSPECTION A typical Class 1 railroad spends \$2.70 per 1,000 car miles for oiler and inspector labor. Experience shows this cost can be cut to 27c with the NMB Kit.

LONGER JOURNAL AND BEARING LIFE A film lubricant is constantly maintained, and bearing end wear is practically nil.

**ELIMINATE VIRTUALLY ALL ACCIDENTS
CAUSED BY HOT BOXES!**



◀ An informative booklet on the NMB Kit, prepared specifically for mechanical and operating officials of American railroads, will be sent on request.

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2084



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Here's Proof of Performance...



"PRESSURE-TREATING OF TIES multiplies their life several times," says W. E. Cornell, track engineer of the Nickel Plate, as he points out ties in service since 1927.

Nothing but pressure-treated ties in 2,184 miles of Nickel Plate track

● In 1921, the New York, Chicago and St. Louis Railroad Company—best known as the Nickel Plate Road—began a program of replacing all untreated ties with pressure-creosoted material. Today, every tie in the Nickel Plate's 2,184 miles of track is pressure-treated.

Performance of pressure-treated ties has been so good that the Nickel Plate no longer maintains test sec-

tions of track. Checks on tie conditions are limited to yearly inspections, at which time each tie that needs replacement is marked for removal.

Nickel Plate's engineering department says it is getting 26 to 28 years of service from pressure-treated ties. That's 400 per cent better than the 5 to 6 year's life of untreated oak previously used.

Pressure-creosoting is the key to long, economical tie life. And for best results, specify USS Creosote, the uniform product of United States Steel's tar distilling operations. For complete information on USS Creosote, contact our nearest Coal Chemical sales office or write directly to United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

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These ore cars utilize the best features of existing ore cars, with a number of innovations and improvements for service on the Orinoco. ASF Ride-Control Trucks, Bolsters, Simplex Brakes and Type "F" Interlocking Couplers are standard equipment.



***They've found the answers to some problems
that are unique in railroading . . . on***

miles of the toughest main line!



• To fully appreciate what "Orinoco" means to railroading, you'd have to actually run a fully loaded, 90-ton ore car down an 8-mile drop in 87 miles! That, in brief, describes United States Steel's engineering feat that stretches from the Orinoco mine face to the Puerto Ordaz docks in Venezuela.

Hauling heavy loads under these conditions calls for unusually rugged ore cars. Magor Car Corporation is providing the answer: cars that are designed to take extreme punishment—*almost continuously*. Otherwise, repairs would run costs sky-high in an area with restricted

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Smooth riding ASF Ride-Control Trucks mean less damage to the cars and roadbed. ASF Simplex Clasp Brakes ease the loaded cars down the grade, and ASF Type "F" Interlocking Couplers provide the needed additional strength and protection against accidental train partings.

It's a source of pride that ASF was selected to furnish the basic running gear, of course. The problems of the Orinoco were a challenge to the best we had to offer. Helping to solve them is the kind of experience that keeps ASF in step with progressive railroading.

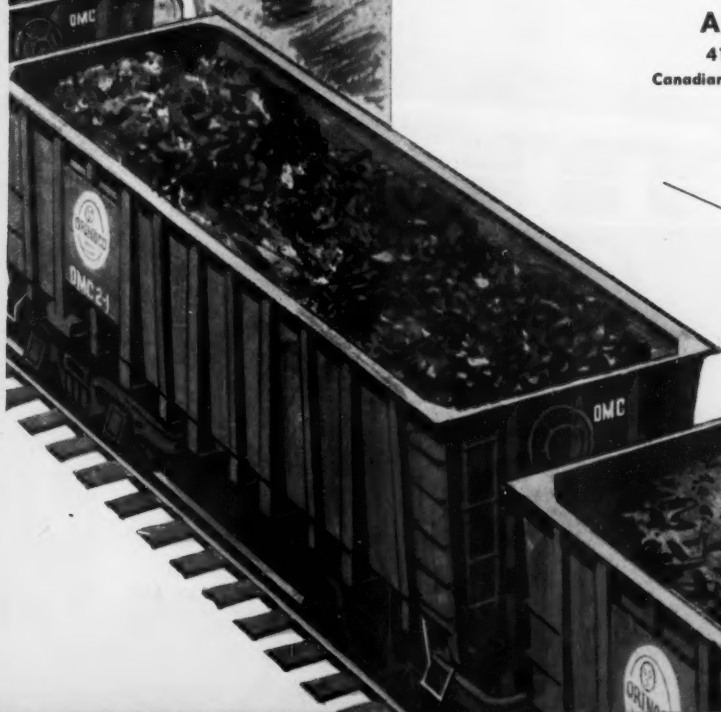
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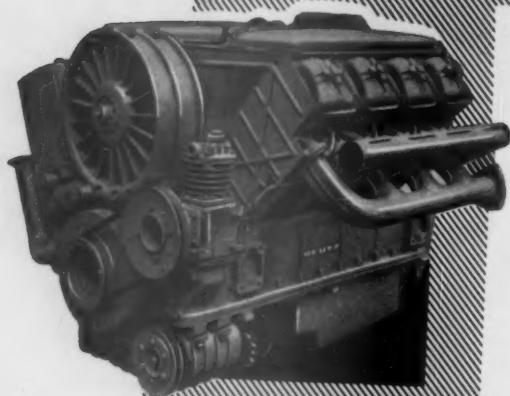
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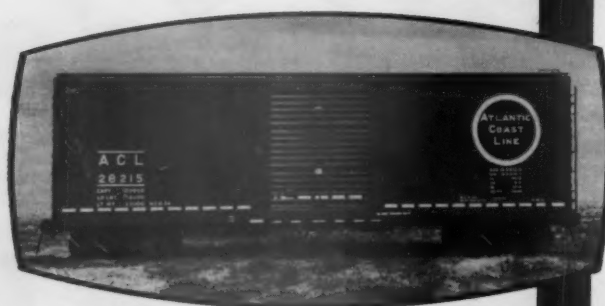
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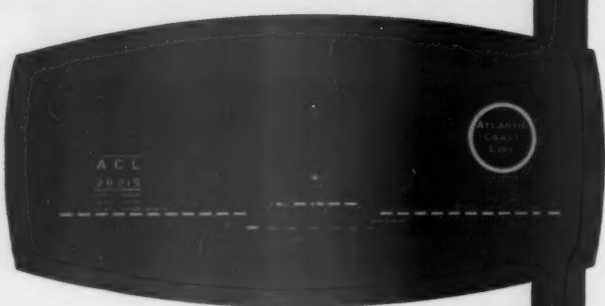
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1 SAFETY AT YOUR GRADE CROSSINGS

Reflectorize with gleaming Prismo. Apply all-weather, all-hour visibility to your rolling stock, markers and signs ... make them safer by letting them be seen ... overcome the serious problem of nighttime grade-crossing accidents!

2 A MOVING BILLBOARD ADVERTISING YOUR ROAD

Don't let the darkness hide your identification! Let the name of your road and your slogans be seen "after hours" by applying a coat of glittering Prismo. Tremendous attention value to your name gleaming along in the night.

3 REDUCED INSURANCE RATES

Automobiles running into the sides of rolling stock, at night, accounted for 32% of all railroad accidents in 1948-51 ... have caused a sharp increase in insurance rates. Apply highly-visible Prismo, increases safety at crossings, reduces your insurance rates!

4 QUICKER IDENTIFICATION IN THE YARD

When your rolling stock is marked with shining Prismo there's no trouble making identification at the "hump". The brilliant gleam of Prismo reflects car number, etc. from long distances in all kinds of weather.

5 LOWER PRICED REFLECTORIZATION

Prismo saves you 75% on reflectorizing costs! Prismo is easy and inexpensive to apply and lasts years and years without peeling. Wears so well that it will outlive four coats of ordinary marking material. Prismo is the BEST for long-lasting, low-cost reflectorizing.

ACL's Modernization Near Maco Speeded by INTERNATIONALS

AT FIRST GLANCE this ACL diesel engine appears to be running through a plowed field. But it is just the mud the 41 hp. INTERNATIONAL TD-9 diesel has dozed up from a swampy ditch to widen the roadbed and berms.



Three IH crawlers teamed with dragline to widen roadbed and berms, improve ditching in swampy North Carolina stretch

The Atlantic Coast Line's roadbed improvement program wasn't delayed a moment when swampy track-side conditions and low-hanging telegraph wires were encountered near Maco, North Carolina.

Three INTERNATIONAL crawlers and a dragline provided the power that made the roadbed and ditching improvements. Two TD-18A crawlers with dozer and scraper handled the bulk of the ditching and shoulder work. And an INTERNATIONAL TD-9 crawler moved plenty of paydirt as it teamed up with a dragline and scooted under the low-hanging telegraph wires to build up the roadbed and berms.

The INTERNATIONAL off-track power line is broad in size, broad in benefits. You can find the right-sized power tool you need to do one or half a dozen jobs among the eight INTERNATIONAL crawlers, each available with a complete line of matched equipment. Check the specs, the price and the performance and you'll have three big reasons why INTERNATIONALS are your best, long-term power investment.

INTERNATIONAL HARVESTER COMPANY, CHICAGO 1, ILLINOIS



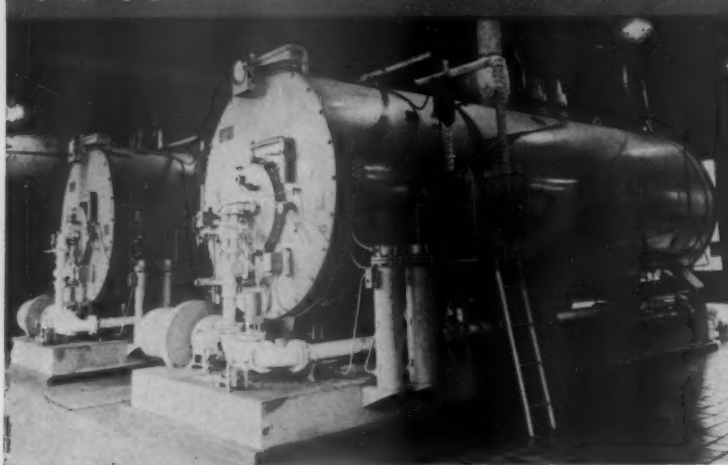
LOW-HANGING WIRES prevent dragline from casting spoil close enough to tracks so IH TD-9 teams up to speed roadbed rebuilding work. Two INTERNATIONAL TD-18As with dozer and scraper worked the higher ground to cut drainage slopes and construct 15-foot shoulder on each side of tracks.



INTERNATIONAL
INDUSTRIAL POWER

MAKES EVERY LOAD A PAYLOAD

"The Railroad Boiler" ON THE B&O



27

AMESTEAM BOILERS

Multiply the Savings On the B&O

Spearheaded by two 600 hp. boilers at the Du Bois Shops (shown above) the Baltimore & Ohio has 27 AMESTEAM Generators placed at strategic points on the system. These low-cost heat producers are providing important economies not only for the B&O but also for many other roads, both large and small, here and abroad.

Completely automatic, "The Railroad Boiler" provides an unfailing supply of dependable heat and process steam at better than 80% thermal efficiency (guaranteed). It handles No. 6 oil with ease. This modern package boiler—A.S.M.E. and Underwriters-approved—is available in single units from 10 to 600 hp. Design pressure—15 to 200 lbs. Higher pressures on special order.

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Letters from Readers

Wherein Is the Virtue Of a Freight Rate?

NEW YORK, N. Y.

TO THE EDITOR:

I refer to the article appearing in the Forum section of the February 7 issue of your excellent publication under the heading "Who Has Got the Answer to This Problem?"

The proposition is not nearly as simple as stated. There are many other factors to be considered. Even when all are taken into consideration it is doubtful if any overall answer could be stated.

In the first place the term "market-relationships" is not a term to be applied to all situations where a number of shippers compete with each other at different rates into the same markets. Recognized market relationships simply do not and never did exist as to most traffic.

The term may be applied, properly, only to the rate adjustments on a few commodities such as grain, coal, iron and steel and perhaps a few others. Otherwise, generally speaking, the so-called market relationships are merely differences which shippers, principally, and sometimes railroads, seek to perpetuate by readjusting rates to maintain such differences when for any reason rates of one shipper may be reduced to a given market. No such suggestions are forthcoming from any source when one rate is increased for any reason. Then the so-called market relationships or differences are not apparently so important.

Another very important factor is to develop in each instance the basis for sale of the articles involved. Some are purchased f.o.b. point of production, others on basis of the freight rate in effect from the nearest producing point, in which case the seller absorbs the difference if his plant is a more distant one. It is important also to know whether this latter basis for sale is based upon the lowest railroad freight rate or the lowest rate by any form of transportation. Many large shippers hold different views as to the application of the law in this respect.

It is important to know in each case the relative amount of traffic shipped normally by each competing shipper into a given market. In the case of your illustration, the problems would be different if upwards of 90 per cent of the potential traffic moved normally from one or another of the shipping points. Obviously, it would not be good business to reduce rates by 25 or 30 per cent from all three producing points to recover only 5 or 10 per cent from a competing form of transportation. In such cases the railroads, as a group, would incur a severe loss rather than a gain in revenue.

It is important to know wherein lies
(Continued on page 52)



MAINTENANCE OF WAY improves spectacularly with the complete mobile and portable communication facilities of Motorola 2-way radio. It takes a working crew off and back on the tracks in a few minutes—no delays, increased safety. Reclaim lost man hours with Motorola on the job. Tampers, weed burners, track laying cranes don't need a Chinese blueprint to get through on schedule with Motorola giving them constant, unbroken contact with trains and *management*. They know where they stand at all times—and so do you and your dispatchers. Frequent up-to-the-minute reports on scores of roads are confirming that

Motorola 2-way radio is paying its way in all operations—in maintenance-of-way, yard and terminal, end-to-end, train-to-train, train-to-way-side, wayside-to-wayside, and in car checking inspection.

It costs nothing to have the complete facts from Motorola's staff of Railroad Radio Specialists. Write for the whole story of Maintenance of Way Mobile and Portable Communications, c/o R. Floyd McCall, Railroad Radio, Motorola Communications and Electronics, Inc., 4501 Augusta Blvd., Chicago 51, Ill.

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World's largest manufacturer of 2-way Railroad Radio Equipment

The railroad handyman



YOU don't need a lot of on-track equipment to handle scattered maintenance-of-way jobs. One man, working alone with an off-track D Tournapull, can often complete dirtmoving and material handling assignments that take an entire work train and crew. This "railroad handyman" drives anywhere under its own power. A phone call starts it out via track, right-of-way, or public highway. 25 miles is only about an hour away. It self-loads on the small jobs, can be push-loaded in fleet operation. It handles long or short hauls, spreads fill or ballast.

You can have confidence in the D Tournapull. It has been in production

since 1948. Thousands of these handy dirtmovers are being used by contractors, mines, loggers and industries all over the world. Many are in use today on maintenance and construction projects for railroads in both the USA and abroad. This rubber-tired tractor-scraper is built by LeTourneau-Westinghouse, a wholly-owned subsidiary of Westinghouse Air Brake Company. That name on any type of equipment has been synonymous with quality, safety and satisfactory railroad service for nearly one hundred years. For proof of what D Tournapull can do for you, ask for a demonstration. Send for details today.



FREE . . . "The Railroad Handyman"

20-page book shows how 7-yd. self-loading D Tournapull cuts time and costs on right-of-way maintenance. Send for your free copy. No obligation. Also ask to see our color movie, "Clear the Track."

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A Subsidiary of Westinghouse Air Brake Company

Tournapull—Trademark Reg. U.S. Pat. Off. DP-691-RR-2

Letters from Readers

(Continued from page 50)

the virtue of a railroad freight rate as such.

Why is it, as in the case cited by you, that shippers located at C and D were not forced out of the market the day the shipper at B negotiated lower transportation charges via an unregulated carrier? If the railroad serving A and B only met that competition by publishing 20c, how did the rail rate cause a competitive disturbance between B, C and D? Or if it did, how did shippers at C and D continue to compete during the interim?

Can it be that although shipper B paid lower transportation charges when he shipped by the unregulated carrier, he charged the receiver the rail rate of 30c thus preserving the competitive equilibrium, and pocketed the difference, and then found it necessary to pass the savings on to the receiver when the reduced rail rate became effective and published in a tariff in the receiver's file?

The problem is not limited to unregulated carrier competition, but embraces all competitive forms, regulated or otherwise. If it were limited as your article suggests the problem would be much less complicated.

I do not pretend to know the answer. I only know the problem, and I believe that anyone who desires to enter the competition for the answer should at least have the whole problem before him.

E. V. HILL
Chairman,
Traffic Executive Association
—Eastern Railroads

[Mr. Hill is perfectly right in his contention that the problem of rate relationships is much more complex than the outline we gave of it in our February 7 article. Our purpose was to raise the issue, and we did so as well as we know how in the limited space available.—EDITOR]

Retired—Still Needs Railway Papers

WAYNE, PA.

TO THE EDITOR:

Having retired from service with the Pennsylvania I am finding I miss *Rail-Age* and *Railway Signaling & Communications* more and more. Time was when I received them regularly. They invariably brought ideas and help of great value in our daily work. Of course, my interest now is somewhat more casual but nevertheless I'm convinced they're still essential to adequate knowledge of current railroading.

W. R. TRIEM
General Superintendent, Telegraph, PRR
(Retired)

Questions

and Answers FOR THE TRANSPORTATION DEPARTMENT

Can a railroad refuse to give an average demurrage agreement to a multi-plant operation at one terminal?

No. A patron can have one or more average agreements.

Can a railroad which serves two plants of the same company at one station refuse to give the company an average agreement covering both plants, on the ground that the two plants have nothing in common (except ownership), produce entirely different commodities, and that one plant releases cars promptly while the other does not?

No. Demurrage rule 9, section G, par. 1, gives a consignee the privilege of having either one average agreement to cover both plants, or separate average agreements for each plant. A railroad cannot refuse to give the consignee one average agreement for both plants for any reason. The choice is wholly up to the patron.—*Eastern Association of Car Service Officers.*

Must railroads notify users of tank cars of arrival of empties?

No. A railroad is not required to do so.

Empty privately owned tank cars arrive at a station for prospective loading.

Is there any obligation, under the demurrage tariff, for the railroad's agent to notify the party for whose

service they are intended that they have arrived?

There is no requirement in the demurrage tariff that such notification shall be made by the railroad's representative.—*EACSO.*

CONDUCTED BY G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will

not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

HERE'S ANOTHER RAILWAY AGE CAR SERVICE "QUIZ"

The Problem—The agent of the Southern at High Point, N. C., has received orders for 20 box cars, to be loaded with furniture, going to 20 different destinations. For which load-destinations did the agent at High Point allocate the cars in order to be sure that, when empty, each car would be in its home district (as shown by the AAR's Car Selection Chart); and, further, that it:

- (1) Would be on home rails; or
- (2) Could be delivered to the owner at the unloading point by the delivering carrier.

Destination
Birmingham, Ala.
Brunswick, Ga.
Buffalo, N. Y.
Cheyenne, Wyo.
Cincinnati, Ohio
Decatur, Ill.
Fort Worth, Tex.
Helena, Mont.
Hope, Ark.
Kansas City, Mo.

Delivering Carrier
Sou
Sou
NKP
C&S
Sou
IT
T&NO
NP
L&A
CRI&P

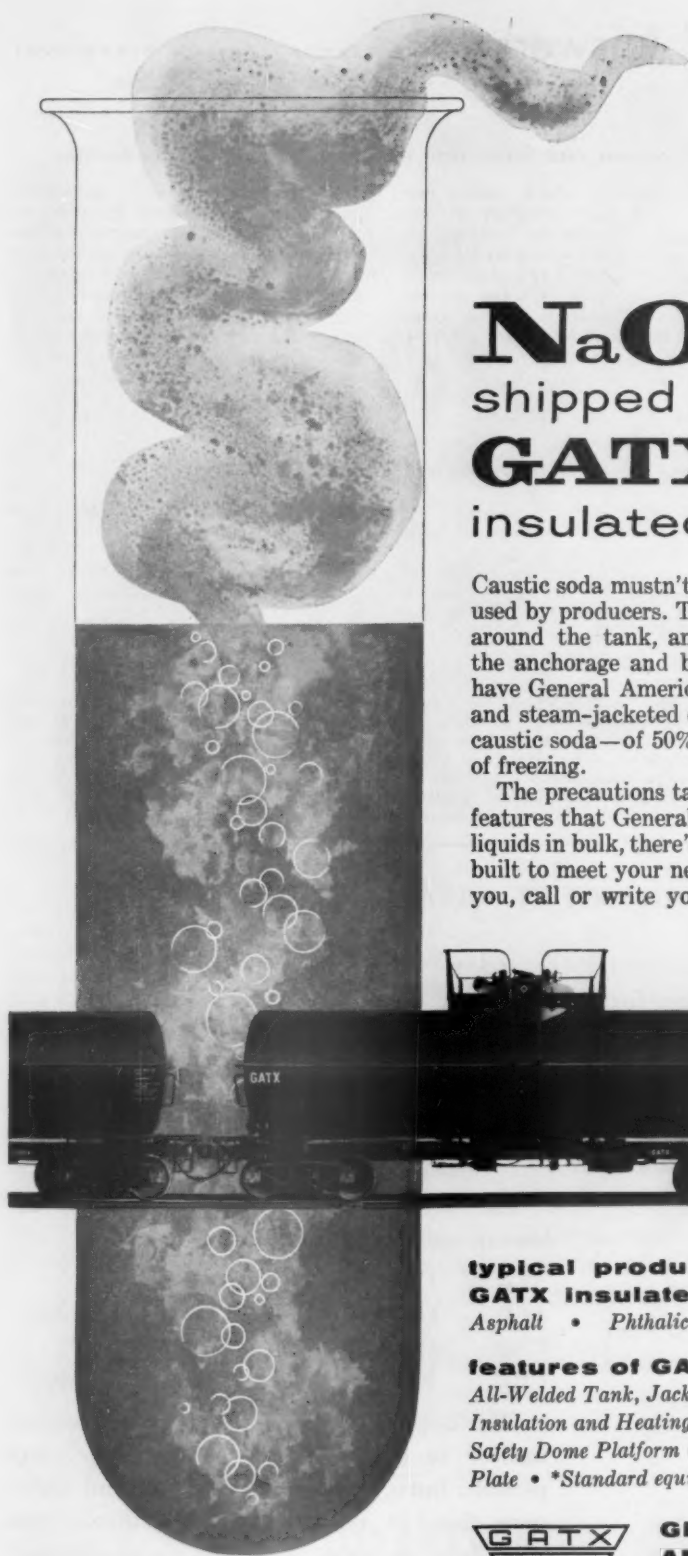
Los Angeles, Cal.
Louisville, Ky.
Madison, Wis.
Oklahoma City, Okla.
Ottawa, Ont.
Philadelphia, Pa.
Portland, Me.
Pueblo, Colo.
Salt Lake City, Utah
Winnipeg, Man.

AT&SF
Sou
Milw
MKT
CPR
PRR
B&M
MP
D&RGW
GN

Cars available for loading were of the following ownerships:

AT&SF	C&O	GN	NYC	SP
ACL	CB&Q	IC	N&W	T&NO
CNR	CRI&P	Milw	PRR	UP
CPR	Erie	MP	SAL	Wab

We believe there is only one correct answer to this quiz. So sharpen up your pencils, burn a little midnight oil, and make sure that, in reaching your solution, you take into account *both* points mentioned above. As usual, we will publish the names of those submitting correct answers. They will be in the April 25 issue.—*G.C.R.*



NaOH shipped best in **GATX** insulated tank cars

Caustic soda mustn't freeze. That's why GATX insulated cars are used by producers. These tank cars have six inches of insulation around the tank, and also specially-designed insulation around the anchorage and bolster areas. In addition, caustic soda cars have General American's exclusive half-oval exterior heater coils and steam-jacketed outlets. Thus, manufacturers can safely ship caustic soda—of 50% and 73% concentrations—with little chance of freezing.

The precautions taken to protect caustic soda are typical of the features that General American builds into tank cars. If you ship liquids in bulk, there's a General American car that's built or can be built to meet your needs. To learn how GATX tank cars can help you, call or write your nearby General American district office.

typical products successfully shipped in GATX insulated tank cars • Molten Sulfur • Wax
Asphalt • Phthalic Anhydride • Wine • Rosin • Latex

features of GATX insulated tank cars*

All-Welded Tank, Jacket and Underframe • Flued Dome Construction
Insulation and Heating Coils • Choice of Interior Linings (Available)
Safety Dome Platform (Available) • One-Piece Longitudinal Bottom
Plate • *Standard equipment unless otherwise noted



**GENERAL
AMERICAN
TRANSPORTATION
CORPORATION**

135 South La Salle Street • Chicago 90, Illinois

Mergers—What Makes Them Good or Bad?

The country seems to be embarked upon another wave of mergers of already-large businesses. The number of automobile manufacturers continues to shrink. Two more of the largest banks in America are getting together. The trend toward making big ones out of little ones in the trucking industry continues in full vigor.

The reasons are manifold. One is that bigness has become respectable—for very practical reasons. The man in the street is coming to recognize that the great technological advances whose fruits he enjoys are possible only from large-scale enterprise, which can spread the cost of extensive research and development over large gross revenues. A multitude of small companies, by joint effort, might duplicate this activity—but, as a matter of actual fact, they just don't do it. The big companies have usually been the leaders in providing employment "benefits" and "security" which the smaller companies cannot afford.

As a mass transportation industry, the railroads find inherent advantages in bigness—at least up to a certain point. Any business where unit costs respond so directly to volume is inevitably given an incentive toward consolidation. Since railroads began, the urge to merge has been strong—and has been in abeyance, usually, only when artificially restrained. Bigness of itself, of course, is no guaranty of either maximum efficiency or improved public service. Every railroader knows that some small and medium-size lines display superlative records in both respects. Bigness imposes added responsibilities on management which are not always discharged well.

Nevertheless the facts remain: the trend in most businesses is toward bigness. Bigness can be magnificently productive, in some situations, in a way that smallness cannot. Bigness spreads risks. Only bigness, as a matter of actual observation, operates in the big leagues of research and development. One of the reasons that railroads find their pricing problems so difficult—as compared, for instance, to those of the utility business—is that often there are excessive numbers of individuals who have to agree, when there are so many railroads.

Railroads have a green light from Congress,

stated in the law, to seek corporate combinations in the public interest. The Supreme Court has recognized that "as a result of the enactment of the Transportation Act, in 1920, consolidation of the railroads of the country, in the interest of economy and efficiency, became an established national policy." Of course the Act of 1920 had something in the nature of a "shotgun wedding" about it — attempting to force weak and strong roads into combinations of approximately equal strength, so that a national rate structure could be established to provide a fair return for all. Subsequent changes in the law removed the feature of wholesale consolidation according to a master plan, but left the door open to mergers developed in the natural pursuit of economy and improved service by the interested parties.

Most of the effective opposition to railroad mergers has, actually, come from interests whose primary concern has not been that of wanting to see the railroads operate more efficiently — but rather that of "vested interests" in the "status quo" as to the employment of labor or retention of existing shops or as contributors to local prestige. This brand of opposition to integration was well described by the Subcommittee on Consolidations of the Railroad Committee for the Study of Transportation, which reported in 1945:

"The idea that railroads should maintain unnecessary lines, services, and facilities to support communities, groups and individuals through payment of taxes and wages, instead of using their resources and energies to serve communities, industries and individuals dependent upon them for transportation, has nothing to commend it, but loses none of its vigor on account of this lack of merit."

The complete loss by the railroads of any monopoly power over any kind of traffic whatever destroys any vestige of social justification that may once have existed for the opposition of localities and regions to railroad consolidations. No railroad today has the power—even if it wished—purposely to effect commercial harm to one point compared with another. Not all railroad mergers can be justified, of course, simply because they are mergers; they must also be able to contribute something toward improved or more economical service—but they should not be prohibited, for non-economic reasons, when positive economic advantages can be established.

Important mergers of the recent past, resulting in the present Gulf, Mobile & Ohio, Chesapeake & Ohio and Nickel Plate systems, have, on balance, fortified the companies themselves and the railroad industry; and have, on the whole, strengthened the communities served by these systems.



AT SPRINGFIELD, each individual part has a tag affixed to it when it is removed from a unit. Another tag is attached after repairs have been made.

ON THE FRISCO . . .

Diesel Control Through Records

Centralized record system not only simplifies locomotive parts repairs and cost control but relieves supervisors of arduous paper work



FOREMEN are relieved of all responsibility for recording data pertaining to repairs. On parts which are removed from units, the mechanic fills out the information required on the tag and a records clerk has the responsibility for finding the tagged part, removing the tag, and transcribing the information to the permanent records. The tags give the names and serial numbers of the parts, their locations, the units they were in and their dates of removal from service.

On the Frisco detailed records of all diesel locomotive parts are kept at a centralized bureau at Springfield. Here data are gathered and analyzed as a means for determining the cause and responsibility for failures of repaired parts.

The system of records kept by this central office has operated to reduce the paper work of foremen at the shop to the extent that practically the only information that the foreman need be concerned with is that which pertains to conditions on a locomotive or its parts that will require attention the next time the locomotive comes to the shop.

The operation of the system begins even before a part is removed from a locomotive. The first thing done by the mechanic who is to remove the part is to tag it with a cardboard form (the same for mechanical or electrical parts) that is attached conspicuously to the part about to be taken off. The tag gives the name and serial number of the part, its location, the unit it was in and the date of removal.

The tag remains on the part until it is deposited at the overhaul location, at which point it is removed by either the mechanical clerk or the electrical clerk. Whichever of these two clerks has jurisdiction over the part concerned also has the responsibility for finding it wherever it may be placed after removal from the unit, for removing the tag, and for transcribing the data on a file record card. The tag is then discarded.

After the part has been overhauled, a second tag is wired on by the mechanic who did the work. This tag is identical with the one applied to a part when removed. The overhaul mechanic fills in the date, name and serial number of the part only. The unit number and position of the part are later filled in by the mechanic who applies the part.

The tag that is put on an overhauled part stays on the part until it is applied in its proper place on the locomotive. It is removed by the mechanic who applied the part, and he fills in the remaining data required as to the unit the part was put on and in what position.

If the part is to be applied to an engine or some other major sub-assembly that is undergoing overhaul, there is another step in the use of the tags. In the case of an engine, as an example, the tag from each component part applied to that engine is placed on a bracket at the front of the engine as the tag is removed and filled out by the mechanic who applied the part. This collection of tags from the different engine components remains on the engine until the engine itself is installed in a unit, at which time the group is sent to the mechanical clerk for recording on the file forms.

Other Functions of the System

The diesel parts clerk also keeps a record of oil samples taken and sees to it that at least one sample is taken from each road unit every 5,000 miles and at least one sample from each switcher every month. He uses a form on which the vertical columns represent diesel units while the horizontal represent the dates. Just a quick glance at the space between the dates of samples on any unit therefore tells him how long it has been since the last oil sample was taken.

While the transportation department is responsible for getting the unit into the shop when due for the appropriate mileage repairs, once the type of mileage inspection due is determined, the records department takes care of checking off those items pertaining to the type of inspection the unit will receive. When the inspection has been completed and the report signed by the mechanics and foreman, the records department makes out a new sheet for the next time the unit is due in the shop.

Scheduling of units into the shop on a mileage basis for heavy repairs is another function of the records department. The approximate date is determined from the accumulated mileage on the unit and from the average miles per month the unit is making and might be expected to continue to make. For those units which get running and mileage repairs at outlying points but heavy repairs at Springfield, the outlying points compile the necessary data and send it to the diesel superintendent at Springfield.

The records system at Springfield is handled by a three-man clerical force—a mileage clerk who keeps a record of all mileage of each unit, an electrical clerk who keeps a record of electrical parts and a mechanical clerk who keeps a record of diesel engine parts. Both the mechanical and the electrical clerks obtain mileage figures from the mileage clerk. The three desks are so situated that the last two clerks consult with the mileage clerk and obtain information from him verbally and without any waste of time.



THE SYSTEM facilitates gathering data for special studies. Here a mechanical clerk is filling out a record of cylinder assemblies changed out.



THE BLACKBOARD on the left tells what units are in the shop and gives a brief description of the work to be done on each. The slots on the right contain the numbers of all units maintained at Springfield for the work sheets detailing the inspection and other work due.

AREA Week at Chicago . . .



G. W. Miller
President, AREA

There will be plenty going on at Chicago this week to provide an interesting time for all engineering and maintenance-of-way officers who can make the trip. A conservative estimate is that there will be upwards of 2,000 such officers and supply company representatives congregating in and around the Palmer House on the one hand and the Coliseum on the other.

The attraction at the Palmer House will be the 54th annual convention of the American Railway Engineering Association. Starting Tuesday, March 15, this meeting will run three days and, as detailed at the right, will consist primarily of the presentation of reports by the association's 22 standing committees, supplemented by many addresses on subjects of particular interest, ranging all the way from atomic energy to the handling of roller-bearing cars.

At the Coliseum the attraction will be a mammoth exhibit of products staged by member companies of the National Railway Appliances Association. A measure of the size of the exhibition is the fact that it will occupy all available space in the building and will feature the products of 122 manufacturers, a record number. Even more important than its scope and size is the fact that the exhibit will include many machines so new that some of them will be pilot models rushed to the Coliseum from "shakedown" tests in the field.

PEOPLE, PROGRESS AND PRODUCTS

Engineering officers gather for three-day meeting and to inspect record NRAA exhibit at the Coliseum

TUESDAY, March 15

● Morning Session—9:45 to 12:00—Grand Ballroom ●

Address of G. W. Miller, president
Report of Neal D. Howard, secretary
Report of A. B. Hillman, treasurer
Greetings from the Signal Section, AAR, T. W. Hays, chairman
Greetings from the Electrical Section, AAR, R. I. Fort, chairman
Address—"Railroading as a Challenge," by R. G. May, vice-president, Operations and Maintenance Department, AAR
Address—"Railroad Interests in Atomic Energy," by Ray McBrien, engineer of standards and research, Denver & Rio Grande Western, and member AAR Committee on Atomic Energy
Address—"Railroad Research Centers on New Horizons," by G. M. Magee, director of engineering research, Engineering Divisions, AAR

● Afternoon Session—2:00 to 4:45—Grand Ballroom ●

Reports of Committees on

Yards and Terminals

Address—"Handling of Roller-Bearing Cars by Gravity," by A. V. Dasburg, transportation engineer, General Railway Signal Company
Economics of Railway Location and Operation

Waterways and Harbors

Address—"Fair Play in Navigational Clearances for Bridges," by Paul F. Royster, assistant to undersecretary of commerce for transportation

Highways

Contract Forms

Records and Accounts

WEDNESDAY, March 16

● Morning Session—9:00 to 12:00 ●

Reports of Committees on

Cooperative Relations with Universities

Water, Oil and Sanitation Services

Wood Bridges and Trestles

Clearances

Impact and Bridge Stresses

Address—"Fillmore Tests of Static and Dynamic Effects in a Bridge Consisting of Beam Spans Supported on Concrete-Filled Pipe-Pile Piers," by R. T. Blewitt, bridge engineer, New York, Chicago & St. Louis

Masonry

Iron and Steel Structures

● Association Luncheon—12 Noon—Grand Ballroom ●

Announcement of results of election of officers

Address—"The Railroad Industry," by N. R. Crump, vice-president, Canadian Pacific

● Afternoon Session—2:30 to 5:00—Red Lacquer Room ●

Reports of Committees on

Maintenance-of-Way work Equipment

Economics of Railway Labor

Address—"The Engineer's Responsibility for the Future," by W. W. Hay, associate professor of railway civil engineering, University of Illinois

Roadway and Ballast

Address—"Roadbed Stabilization," by J. E. Griffith, assistant chief engineer maintenance of way & structures, Southern

Waterproofing

Wood Preservation

Buildings

THURSDAY, March 17

● Morning Session—9:00 to 12:30 ●

Reports of Committees on

Ties

Address—"Progress in Tie Research Program," by G. M. Magee, director of engineering research, Engineering Division, AAR.

Track

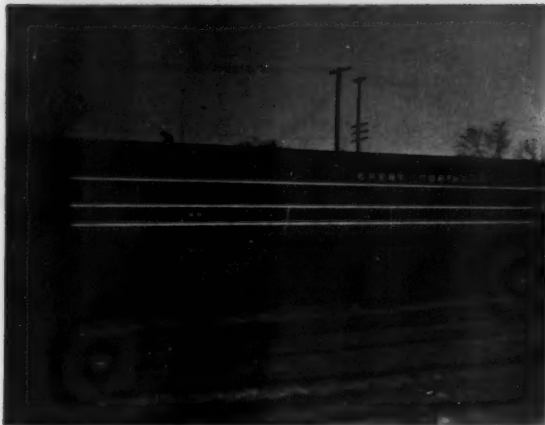
Address—"Maintenance of Railroad Crossings at Grade," by V. C. Hanna, chief engineer, Terminal Railroad Association of St. Louis

Rail

Panel discussion—"Continuous Welded Rail and 78-ft Rail"

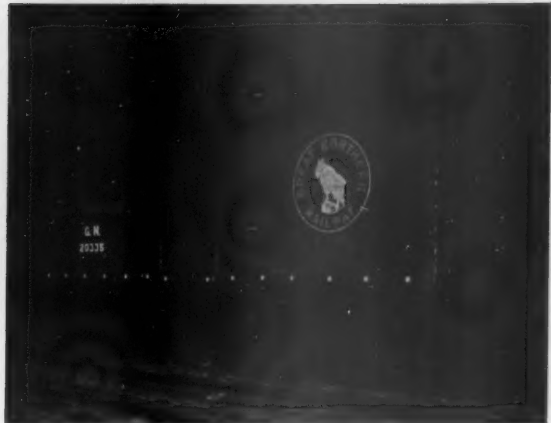
Closing Business and Installation of Officers

On passenger cars . . .



NIGHTTIME safety, as well as appearance at all times, is aim of passenger train reflectorization.

On freight cars . . .



AUTO HEADLIGHTS make car brightly visible and outline its length by reflecting silver discs.

ALL COLOR PHOTOS COURTESY MINNESOTA MINING & MANUFACTURING CO.

On wayside signs . . .



SEVERAL TYPES of wayside signs are shown on table in system sign shop. W. H. Gordenier, Great Northern office engineer, points to reflective emblem made in shop.

GREAT NORTHERN FINDS

How Reflection Helps Visibility

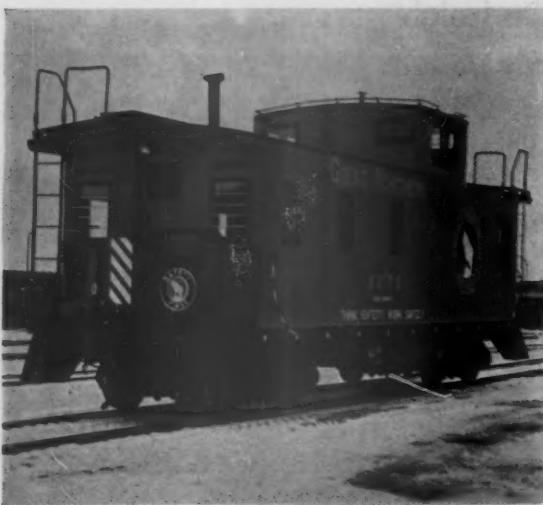
All of its new passenger trains, one-third of its box cars, and thousands of its crossbucks and wayside signs have been reflectorized by the Great Northern in the first 10 years of a system-wide reflectorization program.

Safety and economy have been the two principal objectives:

Safety. Three facts encouraged the Great Northern to make its signs and rolling stock brightly visible both

night and day: (1) man has always had trouble seeing in the dark and high speeds make this human weakness more likely to be fatal; (2) twice as many motorists run into trains at night as in the daytime; and (3) engineers on modern express trains must have wayside signs that they can read at long distances, especially at night.

Economy. Reflectorization, Great Northern style, is



CABOOSES have reflective barricade-striped panel and colored reflective emblem for . . .



. . . REAR-END nighttime protection. On sides use of reflective discs is same as on box cars.

SCOPE OF GN SIGN REFLECTORIZING

SIGNS PRESENTLY BEING REFLECTORIZED

One mile station	Speed limit
Crossing whistle posts	Portable train control
Flangers	Temporary speed
Stop (hand signs)	Stop (highway signs)
End automatic block	Restricting
Car capacity	Mile post
Stop	Culvert number
Railroad crossing	Do not use sand (spring switch)
Junction	Centralized traffic control
Draw span	GN emblem (for equipment)
One mile to yard limit	Truck and bus stop
Yard limit	Restricted clearance (underpass protection)
Station sign	Special highway crossing sign (highway)
Test mile	Bridge number and stream sign
Crossbucks (highway signs)	GN emblem and motto (for automobile underpasses)
Advance warning (highway signs)	
Railroad crossing one mile	
Junction one mile	
Drawspan—300 feet	
1,000 foot tunnel	

SIGNS TO BE REFLECTORIZED

Mine name
Station name
Derail post
Tunnel number board
No trespass board
Snow-shed number
Stop engine
Eastward or westward siding
Restricted clearance
Danger inflammable material
No clearance
Warning underground cable
State line post
End double track

SIGNS NOT TO BE REFLECTORIZED

Section limit board
Number post for industry site
Temporary track sign
Maintenance and ownership (3 types)
Trainmen's warning
Curve number and super elevation

TOTALS

33 types of signs being reflectorized
13 types to be reflectorized
8 types will not be reflectorized

considered cheaper than not reflectorizing; wayside signs and crossbucks are estimated to last two and three times longer than before and to require no field maintenance; the use of reflective striping on passenger cars was found less expensive than previous striping; and the reflectorization of box cars, like other reflectorization, is expected to pay for itself easily through greater nighttime safety, since the prevention of a single accident could easily pay for the entire cost of the system-wide program. In addition, the reflectorized numerals on the box cars make for more accurate identification by spotters—reducing errors and saving the cost of correcting them.

How Rolling Stock Is Reflectorized

Reflectorization of the Great Northern's rolling stock began in 1945 and now has been extended to 8,000 of the line's 22,000 box cars and to all of its new passenger trains—the "Empire Builder," "Western Star," "International," and "Red River"—to make it almost impossible for a Great Northern train to escape the eye of an approaching motorist.

The box-car reflectorization provides for the installation of a row of 3-in. discs along the base of the car—14 silver discs, spaced at 3-ft intervals from one end of the car to the other, so that any part of the car in an intersection is vividly visible hundreds of feet away. A single 3-in. disc is reported to be visible to approaching motorists at night approximately a quarter-mile away with high-beam lights, and over a block away with lights at the low-beam setting.

In addition, for its own convenience in nighttime car spotting, the railroad has used the same white reflective material on the reporting initials and numerals on each car, resulting in two advantages: Spotters with conventional flashlights or lanterns can see the numbers more easily at night; and the initials and numerals last longer, providing economy, according to officers of the road, in greater durability and in fewer mistakes in spotting.

Box-car reflectorization is handled at the railroad's main shops at St. Cloud, Minn. New all-steel box cars are reflectorized before being put into service, and all



CROSSBUCKS, constructed of steel posts and aluminum cross-blades covered with silver reflective sheeting, have ...



... **HIGH VISIBILITY** at night when seen in headlights of automobiles. This is same crossbuck as pictured at left.

box cars that are brought in for general repairs are reflectorized at the same time. The work is handled by the regular paint-shop crew which applies the reflective pieces to the freshly painted surface by hand, using a locating jig to position the pieces properly. Application consists of peeling off the paper backing and sticking the pieces firmly in place, pressing them down with a 2-in. rubber hand roller.

Passenger-train reflectorization, always completed before the train is put into service, is aimed at both daytime and nighttime appearance, as well as night safety. Each car has three horizontal reflective gold stripes running from end to end, separating the Great Northern's familiar orange and green colors, plus reflective gold lettering for the name and number of the car and the name of the railway.

The work is handled by regular painters in the Jackson Street car shop in St. Paul. Striping with the reflective material is considered economical, because of time saved in application. The material is applied to the freshly painted passenger car by simply peeling off the paper backing and pressing the stripe in place; its pressure-sensitive adhesive is said to enable it to stick in place instantly and permanently.

Other rolling stock on which reflective sheeting is used to varying degrees includes diesel switchers operating in the Twin Cities area, where approximately 20 of the 30 diesels in use have had numbers reflectorized, and all new cabooses. The rear end of each caboose carries the Great Northern "goat" emblem, 19 in. in diameter, reflectorized in color, plus a red-and-white barricade 12 in. high by 32 in. long, visible over half a mile away at night.

Ten-Year Program for Signs, Too

In addition to rolling stock, all crossbucks and over 90 per cent of all wayside signs are being reflectorized as they come due for replacement.

The use of reflective sheeting began in 1947 for crossbucks and in 1945 for wayside signs, starting with yard limit and advance warning signs, followed by speed con-



SPEED-CONTROL signs being reflectorized include the three solid panels—red for "stop," green for "resume speed" and yellow for "slow." Striped sign is used in speed restriction areas.

trol signs in 1946 and 1947. Since then the practice has been extended to other signs.

Now, with 33 types of wayside signs being reflectorized (see tabulation) as they come due for replacement and 13 other types due for the same treatment and only 8 types not scheduled for it, the Great Northern has established a central sign shop in St. Paul to handle sign-reflectorization work for the entire system. Although the shop is hardly a year old, the Great Northern is already gradually abandoning sign painting in the field, in favor of reconditioning all signs in the shop where the same work can be done less expensively and with better quality.

Four new factors have entered into the Great Northern's sign-making and reconditioning, all tending toward better signs at lower cost:

- (1) The sign shop itself, by providing machine pre-

What another road is doing . . .



SYSTEM-WIDE program on Santa Fe has involved reflectorization of approximately 30,000 roadway signs. Speed-control signs like this have yellow reflective backgrounds which . . .



. . . AT NIGHT have high visibility when seen in beam of locomotive headlights.

ciseness in place of hand painting, assures a better quality which is expected to result in longer service life and lower cost per year.

(2) Reflective sheeting on the face of the signs, according to Great Northern officers, not only will make all wayside traffic-controlling signs visible at long distances at night, but will help provide two or three times longer service life—up to ten years of field life for the signs, compared with the present three or four years.

(3) Aluminum sign blanks are replacing wood and are expected to make the back of the sign last indefinitely, at the same time eliminating the need for painting.

(4) Painted steel uprights to support the signs are gradually replacing wood posts and are also expected to last indefinitely, providing economy through durability. These will continue to be painted in the field by bridge and building crews in the course of regular maintenance. Only the sign faces are shipped to St. Paul for reconditioning.

Eventually, as old signs wear out, all of the traffic-controlling wayside signs on main lines are expected to be reflectorized with "Scotchlite" reflective sheeting, making them recognizable to locomotive engineers at night hundreds of feet before non-reflective signs can even be seen.

Currently in progress or planned is the reflectorizing of 46 out of 54 varieties of wayside signs, including speed, bridge, mile-board, whistle post and yard limit signs. The new signs, many of them somewhat larger than before for still greater legibility, are made of aluminum in gages from .064 to .081, mounted on one or two channel sections (heavy sections, 2.6 lb per lin ft, for maximum service in the field). They range in size up to 16 by 42 in.

Almost all signs use black lettering on a white background — black "Scotchcal" plastic letters on silver "Scotchlite" brand reflective sheeting. Color is used on the reflectorized restricting sign which is composed of

alternating stripes of reflective yellow on black; and on three unlettered portable train-control signs, 16 by 24 in. in size, which consist of reflective yellow for "slow," reflective red for "stop," and reflective green for "resume speed."

In addition to its wayside signs, the Great Northern, which was one of the first roads to test reflectorized signs and crossbucks, is gradually replacing all of its crossbucks (as they wear out) with steel posts and aluminum cross-blades covered with silver reflective sheeting, which tests have shown to be more than 200 times brighter than white paint when seen in auto headlights at night. The blades are presently being made of .156-gage 61S-T6 aluminum alloy, 6 ft long and 9 in. wide with 6-in. black letters, but probably will eventually be made of extruded aluminum sections for greater rigidity.

The reflectorized cross-buck program — thousands of pairs of Great Northern crossbucks have been reflectorized so far—is an indication of the road's consciousness that motorists do run into trains—48 per cent of all fatal night grade-crossing accidents, for the nation as a whole, are the result of motorists running into the sides of trains that are already in the intersection.

Operations in the Sign Shop

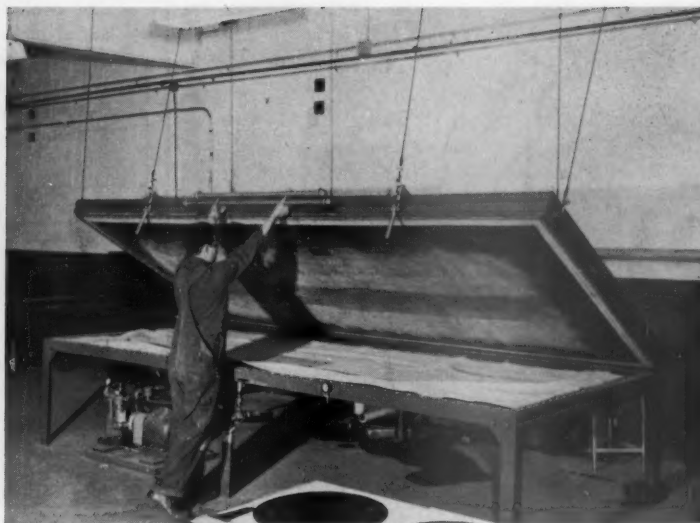
The railroad's new sign shop, which turns out both reflective emblems and signs, occupies approximately 5,000 sq ft—being roughly 65 ft by 80 ft—in a reconditioned building in the Great Northern's Dale Street shops in St. Paul. The ceiling and walls are painted white to get the maximum daylight effect out of the overhead fluorescent fixtures. The floor is a smooth natural-colored concrete that facilitates the wheeling of table-loads of partially made signs.

At one side of the room—partitioned off from the rest of the shop by a full floor-to-ceiling wall and equipped with its own air exhaust fans—is the "bath" room. Here,

Making the signs . . .



SIGN BLANKS are degreased, soaped, rinsed, bathed in acid and dried.



BONDING of reflective sheeting to sign blanks and of non-reflective letters to sheeting is done in this 5-ft by 12-ft vacuum applicator.

the aluminum sign blanks, already trimmed and punched to specifications by the tin shop, get their cleaning, the first operation in the sign shop. This operation starts with vapor degreasing, then soaping to remove printed matter, then rinsing, then a phosphoric acid bath to etch the surface and give it a "tooth" for maximum adhesion of the reflective sheeting, then a water rinse, and finally drying in a forced air bath. The entire process, accommodating 60 sign blanks at a time, takes about 12 min, so that the cleaning time per sign blank is only about 12 sec.

On the other side of the sign shop is the vacuum applicator in which the reflective sheeting is bonded to the aluminum sign blanks. In the center of the shop, between the vacuum applicator and the "bath" room, are wheel-mounted tables on which are assembled sign blanks, reflective sheeting, letters and numerals, preparatory to being bonded together in the applicator. On top of each table is a 3/8-in. plywood "loading board."

The first step after the sign blanks have been cleaned is to lay them on the cloth-covered "loading board" on one of the wheeled tables, and to lay the reflective sheeting in place on top of the blank. Wide-angle silver reflective sheeting is used for almost all signs. A paper backing is peeled off the sheeting, exposing the adhesive-coated underside. This is laid adhesive side down on the sign blank, but does not "stick" since this type of adhesive must be activated. The table is then wheeled over to the vacuum applicator, and the "loading board" and its load of partially made signs is simply pushed on to the bed of the vacuum applicator. The cover of the applicator is pulled down, and after 6 min at 180 deg F the aluminum and the reflective sheeting are permanently bonded together.

The Great Northern uses a 5-ft by 12-ft vacuum applicator. When the cover is closed, it creates a vacuum pressure which hold the aluminum sheet and the reflective sheet firmly together while low-pressure steam heat activates the adhesive to effect the bond. The machine is designed so that the aluminum, the sheeting,



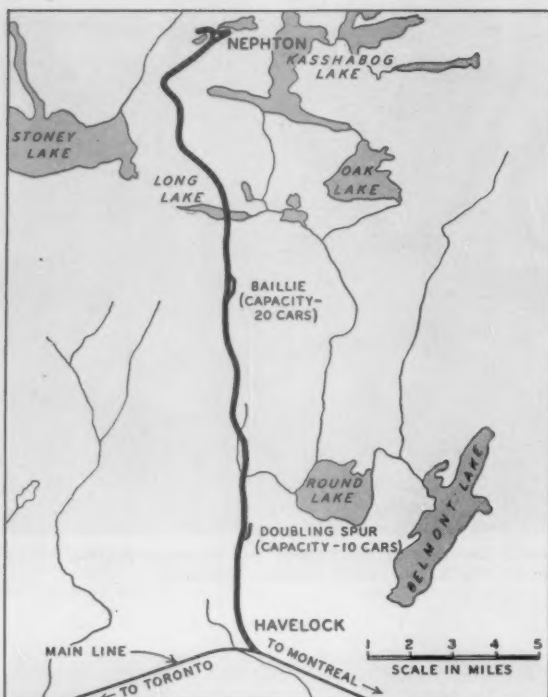
AFTER BONDING of letters to sheeting, protective paper liner is removed. Sign is now complete.

and the lettering (if made of the same material or of "Scotchcal" brand film) can be loaded together all at once if desired.

In the Great Northern shop, the sign blanks and sheeting are bonded together during one day, and the lettering is added during another day. A two-man crew in the shop can turn out crossbuck blades—completely reflectorized, lettered and ready for field installation—at the rate of 110 to 120 a day.

Silk-screen jobs are also handled in the shop, which makes its own screens and does its own screening. Currently in progress is the silk screening of Great Northern goat emblems on reflective backgrounds, for use on new cabooses and on small equipment such as automobiles, cranes, trucks and tractors. Eventually the goat is also expected to be used on selected railroad bridges across highways where it will be vividly visible to motorists approaching the bridge at night.

Four men in the shop handle all of the sign work for the entire system, while the remaining two use a spray booth at one end of the shop to provide the in-shop painting services required in the Twin Cities area.



NEW LINE traverses rough, sparsely populated territory from CPR main line at Havelock, Ont., to mine at Nephton.

New Spur to Mineral Deposits

Canadian Pacific overcomes many of nature's obstacles in building 16.5-mile line to serve mining industry in lower Ontario

By N. M. Kelly

District Engineer, Canadian Pacific Toronto

Through unsurveyed and sparsely populated territory in southern Ontario the Canadian Pacific is completing construction of a new 16½-mile spur line to serve nepheline syenite mines in the Blue mountains of the Pre-Cambrian Shield area.

The new line, complete with wye track, two sidings and a 40-car yard, extends northerly from the road's main line at Havelock to its rail head at Nephton. The new rail service to the American Nepheline Limited mines at Nephton eliminates a 30-mile truck haul formerly required in moving the ore to a refining plant and a rail station at Lakefield, Ont. The refining facilities at Lakefield are now being moved to the mine site at Nephton, eventually consolidating all operations at that point.

Preparatory to construction of the line, reconnaissance

and preliminary surveys were made and stereoscopic aerial photos obtained of the virgin country. A mosaic map was then made and "blown up" to a large scale. Reconnaissance showed the construction of the line in this area would be difficult, since it is situated on the Pre-Cambrian Shield.* Although the draws run predominantly north and south, several stumbling blocks were encountered.

The first three miles produced relatively few difficulties. This area consists of poor farmland mixed with sparse timber, cedar swamps and clay, sand and boulder hills. At Mile 3.5 is a limestone ledge with a drop of approximately 25 ft. The aerial photos proved that going around this would be prohibitive, due to the extra length of line it would entail. From Mile 3.5 to Mile 10, the terrain is mostly clay, sand mixed with boulders, and limestone hills, dotted with cedar swamps and covered with poor popular and birch timber growth. From Mile 10 to the mine the area is all barren porphyry-type granite with trap-rock hills separated by deep swamps.

Three survey lines were run in the vicinity of Long Lake (see map), between Miles 11 and 12, one to the east, one to the west of the lake and one across the narrows. Soundings were taken on several lines across the lake as well as through all swamps. Aerial photos from the lake north to the end of the line showed one predominant draw to the mine, thus giving only one general route in this section.

As finally established, the line has a ruling grade of 2 per cent for movement of light-tonnage trains from Havelock to the mine and 1.6 per cent in the opposite direction. The width of the roadbed at subgrade was set at 14 ft for embankments with a 1½ to 1 side slope, and 18 ft cuts with ¾ to 1 and 1½ to 1 side slopes for rock and earth, respectively. The maximum curvature is 8 deg. The elevation at Havelock is 700 ft, while the elevation is 875 ft at the mine yard. The lowest point is at Mile 4.5 where the elevation is 690 ft; the highest point is 895 ft at Mile 8.8.

As located the line did not require any bridges. All culverts are either Armco Multi-Plate or asbestos-bonded and coated corrugated-metal pipe with paved inverts. Two structural-plate cattle passes were required, each having an inside height of 6 ft 6 in and width of 5 ft 10 in.

CONSTRUCTION OF SUBGRADE

Two contracts were let for the grading work: Part "A" from Mile 0 to Mile 9.7 and Part "B" from Mile 9.7 to Mile 16.5, including the wye. The contractor for "B" had to erect a camp before commencing operations, while the contractor for "A" found sufficient facilities at Havelock. During construction, 7 miles of access roads had to be built by the contractors.

Construction from Mile 0 to Mile 3.5 was relatively simple with no drilling or blasting required. The limestone hill at Mile 3.5 was drilled and blasted and the material yielded was used in a very heavy fill between Miles 3.5 and 4.8. Considerable borrow was required in this area, but a borrow pit adjoining the line at Mile 3.7 facilitated this work. In a side-hill cut at Mile 6.5

*The nuclear mass of the continent, around which, and to some extent upon which, the younger sedimentary rocks have been deposited. This area originally acquired its name because of its shield shape.

Construction of subgrade . . .



CUTS through tough, solid rock made construction more difficult. A total of 173,000 cu yd of rock was excavated.

springs were encountered which, along with inclement weather, greatly hampered progress. Construction of all of Part "A" was accomplished with the use of power shovels, trucks, bulldozers, drills and dynamite. A Gradall was used for trim work.

In Part "B" the rock excavated was handled by 5-cu yd Dumpsters and spread by D-6 bulldozers with curved rock blades. The rock was of an uncommon type and considerable difficulty was encountered in blasting. Only sand borrow was available here, this being hauled by trucks. One of the more difficult problems was securing stability in swamps. Altogether there were 4.4 miles of swampy area with depths ranging from 6 to 25 ft. Part of the swamps was excavated to solid footing with backhoes and draglines before the embankment was constructed; elsewhere they were stabilized by blasting. All excavated swamp material was placed at the sides of the embankments and was used later for flattening the slopes in the final trim.

Ditching powder was used for blasting in the swamps, except in some cases where blasting was done by under-fill methods or by toe shooting. The rock fill across Long Lake was underfill blasted several times to get proper settlement to solid rock. A total of 28,000 cu yd of rock was used in the 300-ft lake crossing, the deepest point below subgrade in the lake being 42 ft.

At Mile 9.6 a 200-ft swamp crossing was excavated with a dragline to a depth of 5 ft, and then blasted an additional 20 ft. A fill of 20 ft above the original swamp level was then placed, which seemed very stable. However, during a 24-hr period after construction, the fill sank approximately 10 ft. This settlement was attributed to a rock fault which had not been detected when the original soundings were taken. The fill was again brought up to grade and since that time there has been no settlement. Two swamps, one at Mile 9.1 and the other at Mile 13.2, had to be drained and undercut. Another particularly deep swamp at Mile 14.9 required 800 cu yd of rock in order to construct a 21-ft length of subgrade.

North of Long Lake it was apparent that beaver dams



ROCK FILLS and metal culverts were used for lake and swamp crossings. Blasting was employed to stabilize fills.

were holding up the level of water in the swamps. Permission was received from the Department of Lands and Forests to destroy 24 of these dams, thereby lowering the water table considerably and easing construction difficulties across the swamps.

TRACK LAYING AND BALLASTING

Track laying and ballasting were carried out under the supervision of an assistant roadmaster, using the company's own forces and equipment. The track consists of 100-lb relay rail and fastenings and treated crossties. Hardwood ties were used on curves and softwood ties on tangents.

The ties were brought in railroad cars to Havelock where they were loaded into trucks. They were then

WHAT IS NEPHELINE SYENITE ?

This mineral with a tongue-twisting name is actually a component of many of the products we use in everyday life. Its principal application is in the manufacture of ceramic products such as dishes, glass bottles, television tubes, lamp bulbs, window glass, vitrified china and floor and wall tile. Research has indicated that it may have numerous other applications outside of the ceramics industry.

Nepheline syenite is a white igneous rock, resembling granite in texture and hardness, which can be processed to any grade or size as required. The mine at Nephton is exploiting one of the purest deposits of the ore yet discovered. The deposit is five miles long, varies from about $\frac{1}{4}$ mile to 1 mile in width, and projects upward an average height of 350 ft above the surrounding countryside. The ore is mined by open-cut methods, then crushed and ground to the desired consistency. Undesirable iron impurities in the pulverized product are removed by magnetic separation.

Building the track ...



RAIL LAYING was handled by self-propelled diesel crane which pulled cars of rail and track material.



SPIKING machines and other types of mechanized equipment enabled 37 men to lay $\frac{3}{4}$ mile of track per day.

hauled to the work site and placed on the subgrade ready for rail laying.

A rather exceptional procedure was employed to lay the new track. Using only 37 men and no work train, the highly mechanized rail-laying organization was able to lay $\frac{3}{4}$ mile of track per day. A 25-ton diesel Industrial Brownhoist crane pulled two cars of rail, bolts and joint bars. A third car, with spikes and tie plates, was hauled behind this.

In front of the crane four men and one assistant foreman placed rail, installed three bolts in joints, and tightened one bolt with a ratchet wrench. Four bridle gage bars were hooked on each rail as it was laid in place, then hooked to the rail on the opposite side to hold the gage so the crane and cars could pass over the rail without spiking. This speeded up operations as well as providing an added safety factor since it was necessary to have only five men in front of the crane.

On the first car of rail behind the crane three men attached joint bars with one bolt. These men also handled



CRANE and supply cars were able to operate over unspiked track by using bridle bars (center) to hold gage.

rail and pulled rail from the second car to the first, as necessary, with a winch mounted on the head end of the first car. On the third car two men distributed tie plates and spikes as the cars moved along.

Behind the cars two men carried the bridle bars ahead, and four men placed tie plates. Spaced behind these men were two men with a power wrench inserting and tightening the remaining bolts. Next, one man with a bar spaced ties to their proper place ahead of three men with a spike carriage and power spike hammer, who partially spiked the line rail. Behind the lead spikers were one assistant foreman and six men with two Dun-Rite power gaggers. Six men with two spike carriages and two power spike hammers followed up to complete the spiking. In all, over 18 miles of track, including 14 turnouts, were laid. Turnouts at the mine yard were placed in advance to be ready for the rail laying gang and reduce delay.

Ballasting operations to date have been somewhat curtailed due to freezing weather. A portable crusher and a temporary siding were put into a gravel pit at Mile 0.25. Crushing operations were started last fall and a stockpile of some 45,000 cu yd of ballast has since been prepared. Center-dump Hart cars are being used for transporting and spreading the ballast. Surfacing work has been progressed through the winter, but also on a curtailed basis due to the weather. The line will be completely ballasted and surfaced as soon as weather conditions permit. In the interim trains have been operating over the portion of track not yet ballasted at a restricted speed. A permanent section force has been set up and two all steel Armco tool houses have been erected, one at Havelock and one at Nephton.

Work was commenced late in the fall on the erection of a communications line for the new spur. Digging of post holes in solid rock is making this a difficult operation. Treated 25-ft poles are being installed with a standard spacing of 264 ft where possible. Maximum spacing is 310 ft. The new line was built under the general supervision of G. W. Miller, engineer maintenance of way, Eastern region, and the author.



Monon Calls It "Trailer-Maid"

Close attention to detail by operating officers is a key to starting a successful trailer-flatcar service

When a "piggyback" load of cigarettes arrived on a recent Saturday morning at the Chicago, Indianapolis & Louisville's yard in South Hammond, Ind., it called for another of those on-the-spot decisions which fall to operating men when a carrier begins trailer-on-flat car service.

The consignee's warehouse was closed for the weekend; and here was lading requiring maximum protection. In this instance, the terminal trainmaster simply had the piggyback car placed on a siding near the yard office, and notified the special agents' office of its location and contents so they could help keep an eye on it. Then early Monday the car was moved to the ramp near the freight house, unloaded and the trailer delivered—no loss, no damage, no claims.

"Job Shop" Supervision

There is no particular significance to the way the Monon handled this shipment, except this: It points up the type of "job shop" supervision which appears to be required in piggyback operations. The early days of Monon's service have been typical. Because the service is "new" and offers good traffic possibilities, the operating department has given it priority in time and at-

tention. At Chicago, the terminal trainmaster receives a report on every trailer moved, loaded or empty. He checks lading on questionable loads, keeps watch on loading times and generally makes up departing trains around

PICK-UP AND DELIVERY SCHEDULE FOR "TRAILER-MAID" SERVICE

Louisville to Chicago	
Closing time at shipper's platform:	2:00 p.m.
Trailer departs New Albany on No. 70:	6:00 p.m.
Trailer arrives Chicago (following morning):	8:00 a.m.
New Albany to Chicago	
Identical with the Louisville schedules except closing time is one hour later, 3:00 p.m.	
Indianapolis to Chicago	
Closing time at shipper's platform:	4:00 p.m.
Trailer departs Indianapolis on No. 90:	10:30 p.m.
Trailer arrives Chicago (following morning):	8:00 a.m.
Chicago to Indianapolis	
Closing time at shipper's platform:	4:00 p.m.
Trailer departs S. Hammond on No. 71:	9:45 p.m.
Trailer arrives Indianapolis:	5:00 a.m.
Chicago to Louisville and New Albany	
Closing time at shipper's platform:	4:00 p.m.
Trailer leaves S. Hammond on No. 71:	9:45 p.m.
Trailer arrives New Albany:	8:00 a.m.

his trailer-on-flat car loads. His responsibility includes the collection of data for determining operating costs, a matter of vital interest to his department.

Thus a piggyback service can be time consuming and does raise a hard-to-answer question for any railroad: How much time and attention can operating officers properly give to their piggybacks without risk to what might be called "regular" responsibilities?

Converting Additional Equipment

The Monon's piggyback service, called "Trailer-Maid Service," began January 11 between Chicago and Indianapolis-Louisville. Overnight service is provided for rail-billed freight at truck-competitive rates. Using ten converted flat cars, and leased trailers, the Monon handled 78 loads the first five weeks. The road is now converting ten additional flat cars. It is using 14 trailer vans, eight open tops and one flat-bed trailer in "Trailer-Maid" Service.

As might be expected, the early days of Monon service have provided an unbalanced movement out of Chicago, and the ratio of empty car and trailer mileage to loaded mileage has not been the best. The road piled up 16,510 loaded trailer miles, Chicago to Louisville, in the first 30 days of the new service. There was no empty mileage. In the reverse direction, Louisville to Chicago, there was empty mileage of 11,748, which was more than double the loaded miles. As the service gains maturity this situation is expected to get better, and some improvement has already been noted. The Monon did not participate in interline movements in the first 30 days and thus did not face a problem that is apt to occur on some of the other roads, that is, retrieving cars and trailers from off-line points.

Piggyback loads leaving Chicago on the Monon are picked up by a cartage company, under railroad contract, and delivered to the permanent loading ramp in the South Hammond yard. Since the ramp is not directly adjacent to the freight house, a yard telephone has been installed so the truck driver may summon the tie-down crew when he arrives. The Monon expects, when volume warrants, to move the ramp nearer its freight house, thus eliminating delays that might arise under the present arrangement.

Tie-Down Time: 20 Minutes

Securing of trailer to the flat car is supervised by the car foreman, and the tie-down job requires, as a rule, about 20 minutes. Close attention is given to lading and it is not unusual for the trainmaster to check personally to see that a load is properly secured and braced inside the trailer. This attention has paid off. In the first month of the service, the road had no claims on shipments moving piggyback.

A careful system of reports on all trailer movements has been set up at South Hammond. Prepared by the freight agent's office, the report on outbound loads shows, trailer by trailer, this type of information. Date and shipper-consignee, commodity and weight, the time trailer was placed for loading, time delivered to the yard, and number of car on which loaded. A similar report covers inbound trailers, showing, among other

things, time of train arrival at the yard and the time the car was placed at the ramp.

This information is transmitted to the terminal trainmaster at the yard and to the Monon's headquarters at Chicago.

At the latter point the road has established a "master dispatcher" operation. It is the responsibility of this dispatcher to maintain frequent contact with agents' offices located at South Hammond, Indianapolis and Louisville.

He must endeavor to have trailers and flat cars at the right place when needed, and he maintains a daily flow sheet on loads and empties. He also prepares a weekly report showing date of load, origin point, destination, consignor-consignee, commodity, weight and gross revenue.

No Terminal Delay

By requiring arrival of loaded trailers at yards substantially in advance of train departures (see accompanying schedule), there has been almost no terminal delay problem.

In fact, as has been noted above, the general arrangement is to pull loaded flat cars before the train is made up and other cuts are shoved against the loaded flats. Switching has been supervised to keep impact speed low, and the need to "handle carefully" has been stressed with the crews.

The piggyback cars are handled on the head end of trains out of Chicago, principally as a matter of operating convenience. The road engine sets out Indianapolis cars at Monon, Ind., where they are picked up and moved to destination by a connecting train. Louisville piggybacks, in turn, are set out by the road engine at New Albany, Ind., across the river from Louisville. The afternoon train, No. 73, arrives at New Albany at midnight and the overnight train, No. 71, arrives at 8 in the morning.

The local switch engine moves set-out cars from both trains to the unloading ramp in time for early-morning delivery across the river into Louisville.

South of Lafayette, Ind., the Monon has several curve restrictions, but the road has had no problem of sway caused by high centers of gravity on piggyback cars. Nor have there been clearance problems except in one instance which involved the high loading of an open-top trailer.

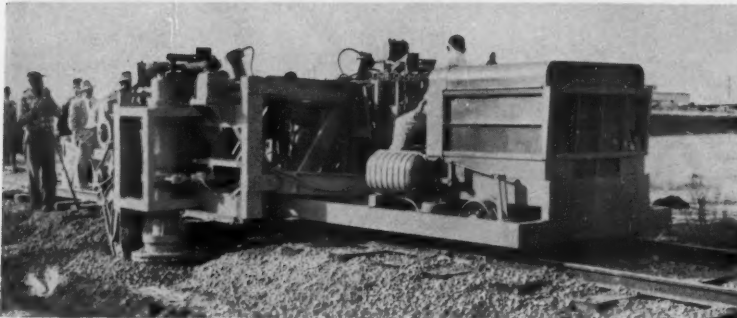
The Monon, incidentally, is one of several roads which have had an unexpected demand for open tops. When traffic moves in this type of equipment it is the Monon's practice to protect the lading with a tarpaulin, strapped and braced to prevent flapping.

As of February 28, the Monon had not had a problem involving a bad-order flat car under load. Careful car inspection prior to train departure has perhaps been a factor.

Meanwhile, there has been only one instance of mechanical failure of tie-down equipment, and quick action by the engine crew prevented damage. They eased the train into the next terminal where repairs could be made. The incident pointed up another good reason for placing piggyback cars near the head end of the train.

What's New

IN ENGINEERING AND MAINTENANCE



Track Undercutter

Now being developed is a machine for lowering track or for skeletonizing without lowering the track. Still in the experimental stage, this Under-

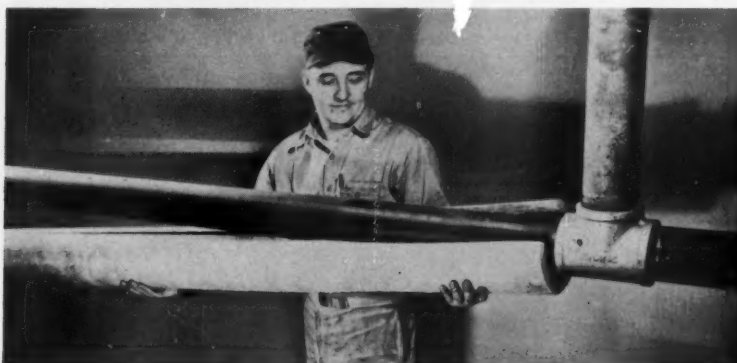
cutter and Skeletonizer is designed to produce an adjustable cut from zero to 22 in. below the top of rail. It is stated greater depth may be secured by additional passes.

The machine is self-propelled and

is equipped with two hydraulically operated cutting bars, each 6 ft long, which are mounted on each side of the machine.

These bars are equipped with cutting teeth and are rotated in a horizontal plane under the track, from the ends of the ties toward the center of the track. They remove the ballast and pile it on the shoulder. The normal minimum undercut is 5 in. However, the machine is equipped with jacks so that the rails may be raised to reduce this minimum by any desired amount.

Hydraulic drives have been provided for moving the machine at work speeds and for positioning the major components. The cutters and clearing travel speeds are operated mechanically through gear, shaft and chain drives. *Kershaw Manufacturing Company, Montgomery, Ala.* ●



Snap-On Pipe Insulation

A new type of pipe insulation, consisting of a fine glass-fiber product, which is molded in one piece so it can be slipped over a pipe and then released to "snap" into position around the pipe, has been announced.

The new insulation is reported to have exceptional thermal efficiency even though it is extremely light in weight. Because of its flexibility and resilience, the new G-B Snap-On Pipe

Insulation is reported not to break, powder, crumble, or bend out of shape. The material is available in 6-ft lengths, thereby enabling faster application and permitting fewer seams and end joints. It is insoluble in water and can be cut easily with an ordinary knife. The material is suited for all heated piping applications up to 350 deg and as a second layer insulator on higher-temperature applications. *Gustin-Bacon Manufacturing Company, Kansas City 5, Mo.* ●

Rotary Impact Tool

Reportedly providing 25 per cent more power than former models is a new rotary electric Impacttool, designated Size 5U. The tool has a ½-in. drive and weighs 6¼ lb. It is said to meet the nut-running requirements of modern high-compression high-torque, automotive engines and to be

able to handle all but the largest nuts and bolts on cars and trucks. Although developed primarily for automotive use, the 5U Impacttool is also said to be a multi-purpose tool which will drill, drive screws, ream, tap, do wire brushing, hole sawing, etc., when adapted with standard attachments, which may be easily applied.

Another improvement incorporated

in this device is a renewable synthetic-rubber bumper which snaps onto the front of the tool housing, preventing the entrance of dirt around the driver and protecting the housing when the tool is used in tight spots.

The Size 5U electric Impacttool operates on 110 or 220-volt a-c or



d-c current of 60 cycles or under. It has an overall length to the shoulder of the square driver of 10¼ in., a side-to-center distance of 17/16 in. and a square drive of ½ in. It operates at a free speed of 1,900 revolutions per minute and exerts 1,900 impacts per minute. *Ingersoll-Rand Company, New York.* ●

WHAT'S NEW IN ENGINEERING & MAINTENANCE

Large Crane-Excavator

A new 3-yd shovel which is readily convertible to a dragline or lifting crane for a variety of railroad jobs is now being offered. This Model 71-B machine incorporates these major features: A positive twin-rope crowd with rectangular inside dipper handle; a light boom; fully independent boom hoist; full air control, except for drum brakes and swing and propelling jaw clutches. Other features include a torque-converter drive (optional); a one-piece cast-steel revolving frame; a choice of four A-frames; 12 conical hook rollers; four optional crawler mountings; and spring set with air release for all steering clutches and friction digging brakes.

The 6-cylinder GM diesel engine supplies power to the horizontal transmission shaft by means of a four-strand roller chain. The chain can be adjusted by sliding the main engine on its base with two built-in jacks. The engine governor is manually controlled through an armored flexible push-pull cable.

The standard boom for lifting crane, dragline and clamshell service is 60 ft, extendible to 110 ft by using removable inserts. All crane-type booms are equipped with a pendulum-type boom-angle indicator mounted in full view of the operator. A pendant-type boom suspension with an 8-part operating line between the A-frame and bridle is available as special equipment. *Bucyrus-Erie Company, South Milwaukee, Wis.* •

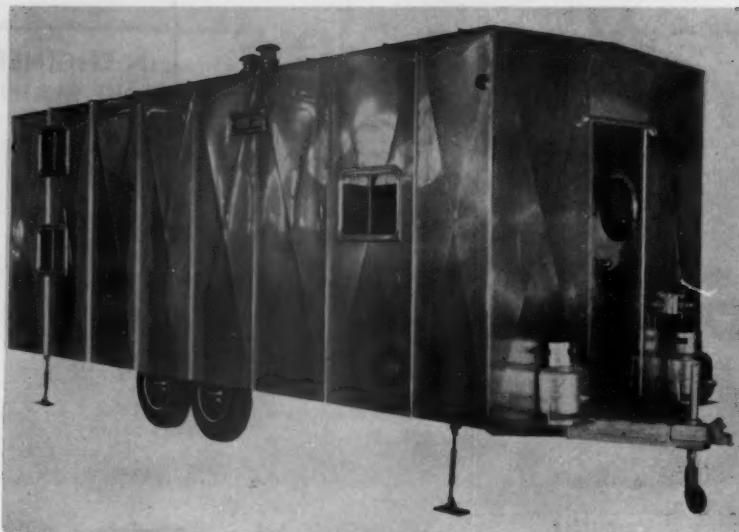
Five-Man Trailer Outfit

A self-contained highway trailer especially designed for a railroad crew of four men and a foreman is now in production.

Known as the Campcar, the trailer provides four bunks at one end, with storage drawers and shoe lockers under the bunks. At the other end is a dinette area which also can be used during the day for recreation and as an office. At night, the dinette converts into sleeping quarters for the foreman. Seats provide storage for a foam-rubber mattress and bedding.

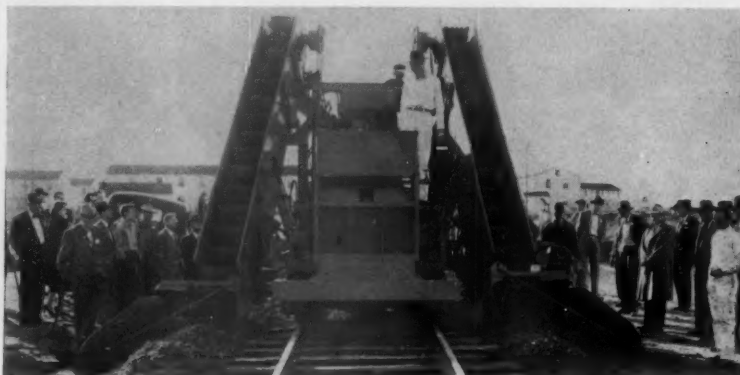
The five-man unit is equipped with a door at each end, a propane stove, a combination ice-and-electric refrigerator, a full-size sink and a separate wash basin, a 30-gal hot-water heater, a space heater, a full-size stall shower with a 140-gal water-storage tank, clothing lockers, numerous cabinets and a dry-chemical toilet. So equipped, the Campcar is a self-contained unit which can operate at or away from city utilities.

In addition to the five-man unit, the manufacturer has developed four



other types of railroad trailers. They are: A dormitory outfit with upper and lower bunks, providing accommodations for up to eight men, and complete with lockers, washroom, shower and toilet facilities; a single-unit complete kitchen; a dining and recreation unit to accommodate up to 22

men; and a combination kitchen, dining and recreation unit for eight men. Used in various combinations, these units, reportedly, can handle traveling crews of as few as two and as many as 50 or more men. *International Equipment Division, Morrison Railway Supply Corporation, Buffalo, N. Y.* •



New Ballast Cleaner

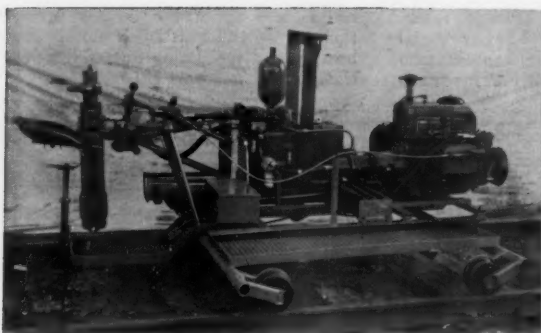
For cleaning ballast behind the Kershaw Undercutter, or for cleaning shoulder ballast independently, a new ballast cleaner has been developed. The machine, still in the experimental stage, includes two hydraulically operated bucket elevators, attached one to each side of the machine. These dig into the shoulder ballast to a depth of 9 in. below the tie. The buckets raise the ballast material and deposit it on a double-deck vibrating screen which separates the dirt from the ballast. The cleaned ballast is spread across the track behind the machine and the dirt is deposited on the side of the shoulder by a conveyor belt. The work operations of the machine are completely hydraulic. It has a mechanical drive for track

operation when clearing trains or making other movements. *Kershaw Manufacturing Company, Montgomery, Ala.* •

New Sealer on Tie Pad

The Fabco self-sealing tie pad is now available with a new and improved sealer which is reported completely to prevent moisture and dirt entering between the pad and tie.

The sealer, 1/16 in. thick, is applied only on the side next to the tie, thereby permitting freedom of movement of the tie plate with no disturbance to the tie bond. The compound is reported to withstand extremes of temperature well. *Fabreeka Products Company, Boston 10* •



W85 SELF-PROPELLED hydraulic spike puller.



W84 SERIES B hydraulic spike puller is pushed manually.

Improved Spike Pullers

Improvements to both the Class W85 and W84 Fairmont spike pullers have been announced. The engine of the Class W 85 Series A self-propelled puller has been relocated to provide better balance. The hydraulic pump is now mounted on the engine instead of in the reservoir, the low-pressure micro-filter has been replaced with a high-pressure filter and an oil cooler has

been added to the system. The lifting post has been changed to accommodate either rail tongs or a hook, a tool tray with an expanded metal floor has been added to the right side of the machine and the gas tank was moved.

The W84 hydraulic spike puller, now known as Series B, has been improved to provide for faster operation and better service. These improvements include a heavy-duty pump, increased pulling effort, better cooling, double

filtration of oil, and larger valve ports to permit a faster return stroke. Needle-bearing rollers have been added to the cylinder carriage so that the pulling assembly is easier to move from one rail to the other. Stronger swivel joints have been provided for the cylinder hose and the cylinder and hand-valve hoses have been relocated to pass under the pantograph frame for better balance. *Fairmont Railway Motors, Inc., Fairmont, Minn.* •



New Self-Propelled Scraper

A self-propelled scraper with a heaped capacity of 23 yd is now being marketed. Designated as the Model B Tournapull, the machine is completely new from end to end and features several innovations in design.

The Model B has an overall length of 40 ft 6 in. and is 11 ft 8 in. wide and 12 ft 7 in. high. It is powered by a 293-hp diesel engine and has 10 gear ratios, giving speeds from 2.4 to 28.4 mph.

Loading has been made easier by its new scraper and deflector plate design and high apron lift, and by locating the wheels inside the cutting edge of the scraper blade.

Weight distribution in the new unit puts 56 per cent of the loaded scraper weight on the drive wheels which are equipped with 27 by 33, 30-ply tires. Tires and wheels are completely interchangeable between the prime mover and scraper.

The Model B is equipped with power

steering, and its large fuel tank is said to provide a 10-hr supply for full-shift operation without refueling. The machine has a power-transfer differential to keep power flow equal and constant to both drive wheels.

Control of the new unit is entirely electric, and braking is provided by four-wheel air brakes together with a parking brake on the output shaft of the transfer case. It is reported that all major assemblies, such as transmission, clutch, final drive and differential, can be lifted from the machine easily and quickly without the necessity of handling other components. All electric motors are also reported to be easily accessible. Despite its size, the manufacturer reports that the Model B can turn around non-stop in a space 35 ft wide.

Interchangeable with the scraper for use with the Model B is a 35-ton rear dump which is rated at 23 yd struck and 27 yd on a 2-to-1 heap without sideboards. *Le Tourneau-Westinghouse Company, Peoria, Ill.* •

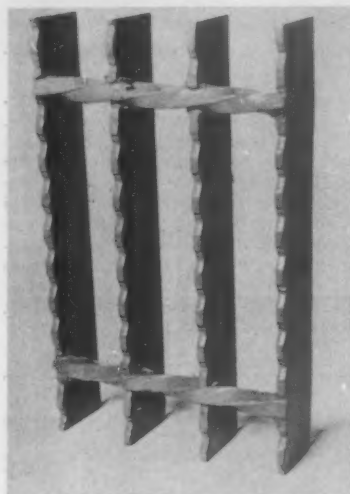


Metal Kegs for Spikes

Track spikes made by Inland Steel Company are now shipped in all-metal containers at no extra cost. It is said that these containers eliminate the disadvantages of wood kegs and provide complete weather protection for soft or high-carbon steel track spikes manufactured to AREA or ASTM specifications. These containers, it is claimed, can be easily handled with a magnet and can be more safely stacked. They are equipped with rolling hoops to fa-

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cilitate handling. It is pointed out that the packages are easily identifiable and that they may be reused for many shipping and storing jobs. *Inland Steel Company, Chicago 3* •



Steel Grating for Walkways

A new type of steel grating employing bars with mill-rolled serrated edges is now available. This feature is said to provide an extra margin of safety when the grating is used in areas where walking conditions are hazardous. It is reported to provide an excellent traction surface with comfortable walking conditions. The grating is available in 1, 1¼, 1½ and 2-in. by 3/16-in. sizes. The crossbars are of twisted steel. *Blaw-Knox Company, Pittsburgh* •

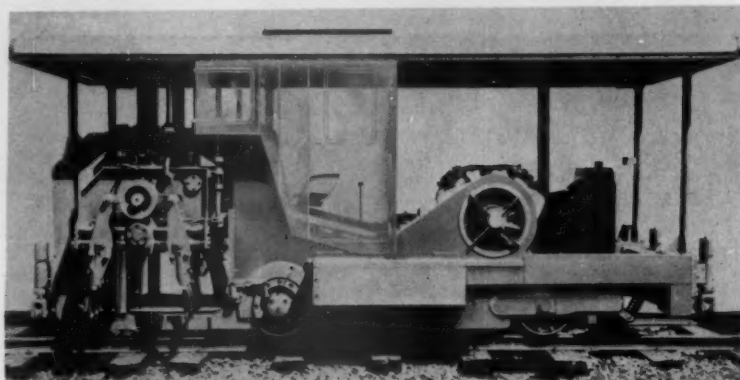
Spray Coating for Metal

Bitumastic "K," a new spray coating for metal, which is said to provide protection from corrosion along with a moderate degree of insulation, has recently been announced. This product is made of processed coal-tar-pitch mineral filler, solvent and granulated cork. It is black in color, requires no primer, and it is reported that one application of the coating produces a protective covering up to ½ in. thick.

This cork mastic was developed for use where metal tanks containing heated materials require corrosion protection in addition to insulation for the prevention of major heat losses. It is said that it may be used where massive insulation is not required. It is further stated that the dual protection afforded by the product makes it spe-

cially suited for oil storage tanks, asphalt storage tanks or any metal tank whose contents are kept at temperatures up to 150 deg F. This mate-

rial is also applicable for the protection of corrugated steel siding and heating and ventilating ducts. *Koppers Company, Pittsburgh 19* •



Tamper Improved

A new version of the Matisa automatic tamper incorporating several improved features is now available. The new machine is known as the Model B-24. Major improvements include: Relocation of the tamping units to the front of the machine, thereby permitting the dead weight of the unit to ride on tamped track; and two-depth tamping which enables the operator, by merely pushing a button, to insert the tamping tools at either of two depths, permitting uniform tamping of both high and low raises. All chain drives have been eliminated through the use of drive shafts and universal joints, except for the chain which transmits power from the transmission to the driving axle. Additional tamping-unit clutches have been added by which the tamping tools on either side of the machine can be operated independently of each other.

Other improvements incorporated in the new unit include: Automotive-type hydraulic brakes with larger brake drums; four-point weight distribution; lengthwise mounting of the motor, thereby making the machine more readily adaptable to various engines; a centrally located seat for the operator; a new system of constant lubrication for all gears; addition of an operator's cab; and built-in setoff wheels. The new operator's cab allows visibility both during tamping operations and when traveling. The built-in setoff consists of four pneumatically actuated setoff wheels which can be lowered onto transverse rails; at the same time, the wheels raise the tamper so that it will clear the running rails and can be rolled off the track onto a crib or similar type setoff.

The Model B-24 is a supplement to the company's Standard Tamper which will continue to be offered. *Matisa Equipment Corporation, Chicago 4* •



Ballast Router

Designed for use in rail-renewal operations is a new ballast router for

removing excess ballast from tie cribs. The machine, operated by a crew of two men, removes and conveys high ballast from the cribs to the side of

the track and sweeps the ties ahead of the adzers. This operation is performed by an endless chain which is fitted with steel digging buckets that cut a level trench in the tie crib parallel with the top of the ties. It is said that just enough ballast is re-

moved to expose the tie for sufficient adzing. A rotary broom sweeps the ties clean. It is reported that this operation also improves drainage and permits easier and faster application of rail anchors. *Nordberg Manufacturing Company, Milwaukee, Wis. •*



Carrier for Motor Cars

A trailer is now being offered for carrying track motor cars over the highway. This trailer, known as the Fairmont TH1 Series, has a load capacity of 1,500 lb, weighs 520 lb, and includes loading ramps, complete hitch,

safety chains, tail light with license bracket and wiring. It is equipped with dual 14 by 4.50-in. pneumatic tired wheels.

These wheels are mounted under the frame to provide minimum overall width and a low center of gravity. *Fairmont Railway Motors, Inc., Fairmont, Minn. •*



Increased Capacity for Tractor-Mounted Compressor

Announcement has been made that the air output of the Le Roi Tractair has been increased from 105 to 125 cfm without increase in the list price of the machine. This makes the Tractair a combination 125-cfm air compressor and a 35-hp wheeled tractor. New standard equipment includes additional piping, larger carburetor and aftercooler. The compressor operates at a governed speed of 1,350 rpm. An "Econtrol" has been added as standard equipment. It is said that this device will vary the engine speed to match air demand.

The power plant is the Le Roi D226 engine which has been combined in the same block with a two-cylinder compressor. The tractor has five traveling speeds with a maximum of 17 mph. It is constructed with high ground clearance, but a low center of gravity is said to allow the unit to operate on a 2-to-1 slope.

Attachments, such as the Mobildrill, highway patch drill, multiple tamper, winch, backhoe, front end loader, backfill blade, utility boom and utility platform, are said to add greatly to the versatility of the unit. *Le Roi Division, Westinghouse Air Brake Company, Milwaukee, Wis. •*

New Weed and Grass Killer

Chlorea is the name given to a new weed and grass killer of the non-selective type. The mixture is a uniform, non-separating combination of sodium chlorate, borate and CMU. This combination is said to provide the effectiveness of chlorate on deep-rooted weeds with the prolonged soil-surface action of CMU on shallow-rooted grasses and annual seedling growth. It also is reported to have a lasting residual effect to inhibit regrowth. Chlorea is non-poisonous and, because of its borate content, does not create a fire hazard when used as directed. The chemical can be applied dry or used as a water-mixed spray. *Chipman Chemical Company, Bound Brook, N. J. •*



Combination Welder Unit

A choice of either a-c or d-c welding current is provided by the new Lincoln combination arc-welder. The new Ideal-arc is said to provide the right type of arc for every type of manual welding application, permitting selection of either a soft or forceful arc.

The machine is available in several combinations: it can be obtained as an a-c welder without the d-c current, which unit can quickly be fitted with a d-c package at some later date. A combination a-c and d-c machine is also available with selection of either current possible through the twist of a switch handle. Various output capacities of d-c and a-c can be combined to fit the machine to the job requirements.

For a-c welding jobs the machine

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provides a single-phase transformer-type welder, with control of both voltage and amperage. In addition to the dual-control of the arc, the machine has an arc-booster switch for selecting normal or "hot" starting.

For d-c welding the Idealarc provides current through heavy-duty rectifiers. Dual-control is also provided for the d-c operation, as is the arc booster. Current models available are 300, 400 and 500 amp a-c combined with d-c capacities of 200, 300, 375 and 450 amp. *Lincoln Electric Company, Cleveland •*



Clearing Attachment For Chain Saw

The Model 17 Homelite chain saw can now be used as a clearing unit by the addition of a new, low-cost attachment.

The new attachment is designed to permit faster, easier and more profitable clearing.

It is said to eliminate stooping and bending on the part of the operator while felling trees, and to permit the operator to reach out when cutting limbs, without having to go underneath. Logs can be "bucked" lying flat on the ground, since the attachment is fitted with a jaw-grip spike which takes the thrust of the chain, prevents logs from rolling or spinning away and keeps the chain up out of the dirt. The manufacturer claims that small trees can be cut up without the blade pinching or chain jamming. *Homelite Corporation, Port Chester, N. Y. •*

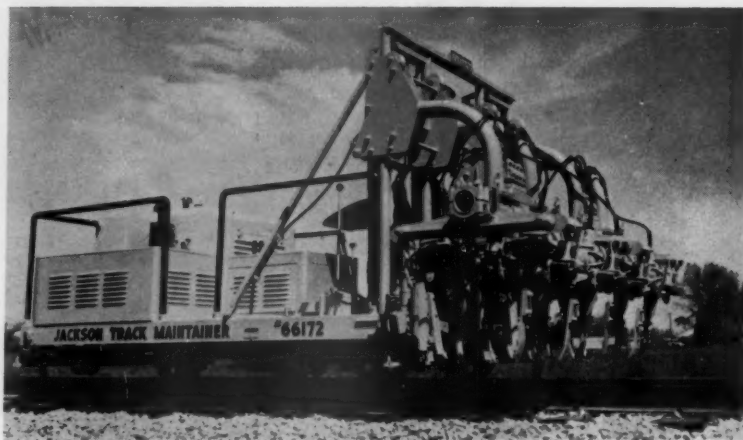


Grapple for Gradall

A grapple attachment for the Gradall, which is reported to work like a human hand and to provide an almost complete range of movements, is now available.

The manufacturer states that this grapple can be controlled by the op-

erator to rotate accurately through an arc of 200 deg in a horizontal plane. It can be tilted 45 deg either way from the center with the boom and its fingers open and close through an arc of 100 deg. The grapple is operated by hydraulic cylinders controlled by the operator. *Warner & Swasey Co., Cleveland, Ohio •*



Engines for Track Maintainer

Standard equipment on the Jackson Track Maintainer will now be either a Continental gasoline or diesel engine as desired. A Continental F226 will be used where gas-engine drive is specified. Where a diesel-engine is specified, a Continental HD260 will be used. As reported in *Railway Age* August 30, 1954, the Jackson Track

Maintainer is a tamping machine of entirely new design which is adaptable to the dual purpose of either spot-surfacing track or production tamping.

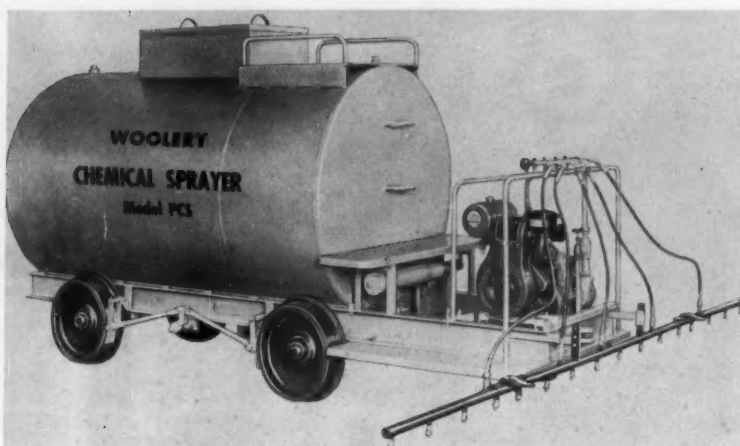
It derives its dual nature partly from the fact that it has a split crosshead so that it may be used to tamp under either or both rails, separately or simultaneously. *Jackson Vibrators, Inc., Ludington, Mich. •*

Rail-Mounted Sprayer

A 1,000-gal chemical-sprayer outfit with a 14-ft spray boom, designed for towing along the rails, is now available. It consists of a tank mounted on a 6-in. channel frame supported on 2½-in. ball-bearing axles with 20-

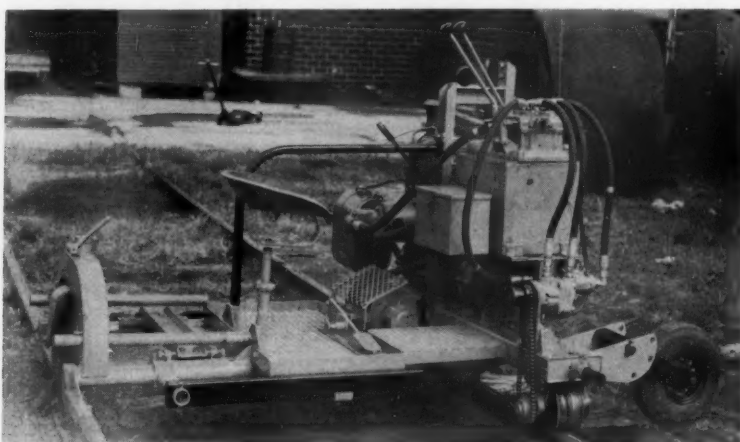
in. chilled-face wheels. All four wheels are fitted with shoe-type brakes which are operated by a foot pedal.

The spray boom is mounted on the front of the frame and is divided into five sections, any of which can be used independently, as well as all together. The boom is hinged so that



it will fold back against the car for clearance. Power for spraying is provided by a 50-gpm pump made entirely of bronze and operated by an 8-hp single-cylinder air-cooled engine equipped with a clutch and speed re-

ducer. Agitation of the chemical mixture in the tank is provided by a pressure jet, entering at a tangent and producing a swiveling motion throughout the tank. *Woolery Machine Company, Minneapolis 14, Minn. •*



Tie-Handling Machine

The W90 Series A Tie Handler, announced recently, is a new machine for removing and inserting ties. The unit is hydraulically powered, self-propelled and may be operated by two men.

When it is working as a tie re-

mover, the machine is fitted with a removable boom which, it is said, can be removed or applied within a few minutes. It is equipped with pneumatic set-off wheels and self-storing extension lift pipes. It is reported that two men can remove the unit from the track. *Fairmont Railway Motors, Inc., Fairmont, Minn. •*

Versatile Locomotive Crane and Pile Driver

A new diesel-electric locomotive crane-pile driver can be converted to a straight crane for a variety of jobs. It is known as the American DiesElec-tric crane.

Pile-driver leads are hung from a standard crane boom and can be lowered from the upright position to a horizontal position and placed on a flat car. The leads can also be arranged

to fit into a gondola car if desired. Raising and lowering of the leads is accomplished without any change in the reeving of the ropes, being done by merely raising or lowering the boom. It is stated that the changeover from a complete pile driver to a straight crane for lifting and clamshell work takes only about one hour.

Reportedly a great time saver is a new power-operated batter design. A small motor shifts the leads to either side for a batter of up to 2½ in. per ft.

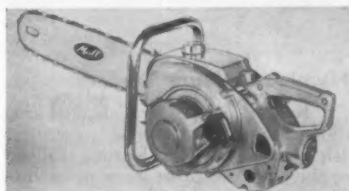
In the upright position the moonbeam is within the crane width and full clearance is provided. The motor for battering the leads can be powered by either steam or air. If air powered, the air can be supplied from the crane air tanks. Fore or aft batter is accomplished by raising or lowering the crane boom.

Steam or air for operating the hammer is supplied from a trailer car. Special piping through the crane's carbody brings the pressure to the leads. The piping is extended to the rear of the carbody so that only a short length



of hose is required to connect the line to the source of power on the trailer car. The hose to the hammer is short since it connects to a standpipe half way up on the leads. This is said to eliminate the draping of hose around the crane and lost time in handling the hose when moving or swinging the machine. It also eliminates the danger of running over and cutting the hose.

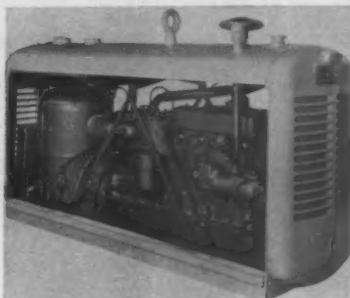
Platforms are provided on the leads so that men no longer have to hang on a ladder while working, but have actual standing platforms at several heights. Ladders extend between the platforms. *American Hoist & Derrick Co., St. Paul, Minn. •*



New Chain Saw

Featuring a 5-hp, high-speed, direct drive for a 15-in. cutting bar and chain is the new Model 4MG chain saw. The unit is equipped with a finger-tip manual-type oiler on the handle. The manufacturer also announces that it will soon have in production a high-horsepower, lightweight chain saw (Model 5MG) for both one-man and two-man operation. *Mall Tool Company, Chicago •*

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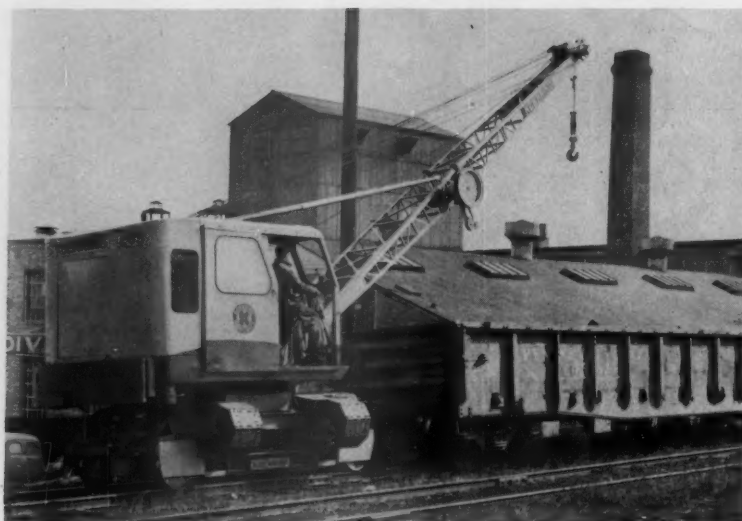
Compressed Air Supply For Jordan Spreaders

A complete packaged unit for supplying compressed air to Jordan spreaders, ditchers and snowplows is now available. It includes a 125-cfm compressor driven by a 35-hp wet-sleeve engine, and all of the hose, valves, details and data necessary to adapt the package for installation on a specific unit. It is said that this packaged unit supplies the correct air pressure and volume for proper operation and thereby provides an independent, but dependable, air supply to insure maximum operating efficiency. It is further stated that there is greater flexibility of operation because any kind of motive power can be used with such machines regardless of its air-producing capacity. *O. F. Jordan Company, East Chicago, Ind. •*



Aluminum House Trailers

A line of highway trailers featuring all-aluminum "monocoque" construction is available for housing railway employees. The entire body of each of these trailers is of aluminum and is constructed as an integrated unit which is said to distribute shock, stress and strain to all trailer-body members and thereby reduce wear to a minimum. The floors of the Mon-O-Coach are heated with a fluid radiant-heating unit furnished by Vapor Heating Corporation. It is said that, because of their ruggedness, these trailers are suitable for off-the-road use. Standard units are now available or special units may be built to railroad specifications. *Mon-O-Coach, Inc., Louisville, Ky. •*



Improved Rail Crane

The Koehring Rail Aid crane currently in production features several major improvements, according to a recent announcement. These include a simple upper machinery arrangement with only two independent major shafts, automatic traction brakes that are engaged at all times except when

traction is applied, and 20-in. main drum clutches of the internal-expanding type, equipped with reversible bands.

Four conical hook rollers with an eccentric adjustment are said to hold the turntable securely to the car body and resist tipping in all directions. *Koehring Company, Milwaukee, Wis. •*



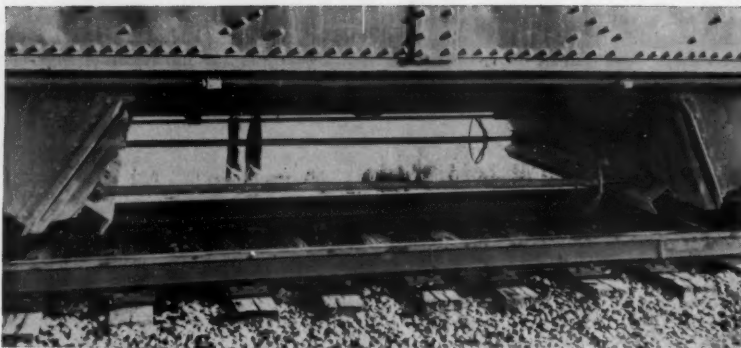
Washer for Trailers

A movable truck washer equipped with reversible long-fiber motor-driven brushes for washing trailers used in "piggyback" service is available. This equipment may be installed in a washer house adjacent to the loading or unloading location. Because of the very slow motion of the washer alongside the trailer and its ability to reverse the direction of rotation of the washer brushes, this washer is said to be even effective for washing trailers with corrugated sides where the rib spacing is

as close as 8 in. The washer carries its own water and electric power connections on a reel. *Ross & White Co., Chicago 6 •*

Aid to Ballast Unloading

Utilizing Simplex forged-steel trench-brace fittings, the Elgin, Joliet & Eastern has developed a labor-saving method of unloading ballast from hopper cars. To adapt the trench brace for unloading this type of car, a 1½-in.

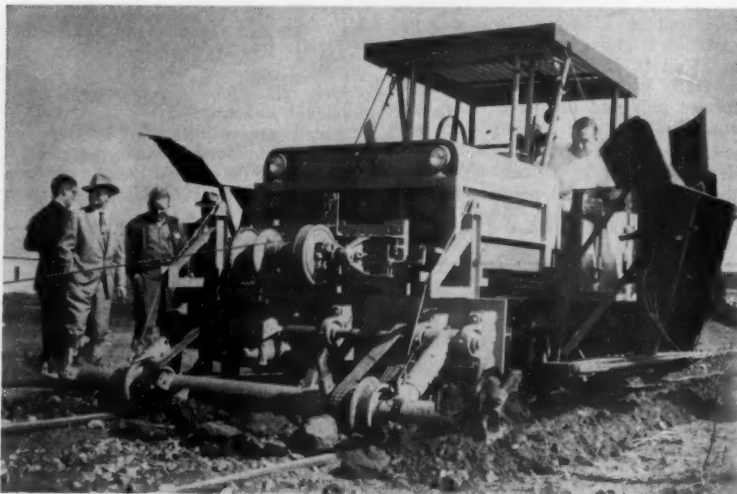


pipe of proper length is welded to the butt end of a fitting and two additional arms and a wheel are welded to the standard wing nut of the fitting, with the arms of the wing nut bent up for easy opening and closing of the screw.

A length of channel beam is welded across the two hopper doors (see picture) at each end of the car. Two of the adapted braces are mounted above and between the channel beams and tightened against the two opposite hopper doors. Extension or opening of the screw on the Simplex brace holds

the hopper doors closed. When the screw extension of the brace is shortened or closed the weight of the ballast against the hopper doors holds the brace tightly in position against the channel beams.

The flow of ballast from the car can be controlled by closing the screw extension of the brace, which in turn allows the hopper doors to open. No men are required inside of the car for shoveling, and the work-train engineer can shake the ballast down by jolting the train. *Templeton, Kenly & Co., Broadview, Ill.* •



Road Crossing Scarifier

A new attachment for the Kershaw ballast regulator, scarifier and plow is designed to scarify and remove material from between the rails and the tie ends at road crossings. This Road Crossing Scarifier is a rotating drum to which scarifier teeth have been attached. It is mounted on the front end of the Ballast regulator which is powered through the crossing by a cable winch capable of exerting a 6000-lb pull. As the machine travels through the crossing the scarifying teeth on the rotating drum dig into and loosen the material packed at the ends of the ties and between the rails. The machine

then travels back through the crossing under its own power and plows the loosened dirt away from the crossing with the regular reversible plow mounted on its rear end. *Kershaw Manufacturing Company, Montgomery, Ala.* •

Improved Truck Crane

An improved Model T-35 Bantam truck crane is said to be mountable on any of the company's complete line of carriers. It is also reported that the crane has an over-the-road speed of 40 mph, 12,000-lb lifting capacity and 6-rpm swing speed. Any of nine at-

tachments may be used interchangeably to convert the equipment from a crane to a clamshell, trench hoe, shovel, grapple, pile driver, magnet or back-fill blader.

A power boom hoist has been supplied to permit accurate boom spotting. Also the machine has a jack-shaft-mounted tag line which can be



used as an ordinary tag line or for a power-operated shovel-dipper trip. The machine is equipped with anti-friction bearings, machine-cut gears, internal expanding band-type clutches with molded linings and "snap in" rollers. External contracting brakes have been provided as well as band-type swing brakes for locking the basic unit in any desired position. *Schild Bantam Company, Waverly, Iowa* •

Diesel Torque Converters For Railway Cranes

A new railway crane with a maximum rated lifting capacity of 250 tons at 17½-ft radius is now offered to complement the Bucyrus-Erie line of heavy-duty diesel-electric and steam railway cranes. This crane is said to be designed to combine big capacity with safety, dependability and operating ease.

The power plant consists of a General Motors Twin 6-71 diesel engine of 350 bhp at 1,800 rpm which drives the machine through a Twin Disc torque converter. Power is transmitted through a chain drive to air-actuated friction clutches to provide forward or reverse motion. Either unit may be used independently to perform all crane functions including the lifting of all rated loads at reduced speeds.

A battery-charging generator, starting motor and heating unit are provided for each engine. Each diesel has an auxiliary air compressor of sufficient capacity to supply air for normal operation. A large air compressor is also provided which is operated by an air clutch mounted on the engine extension shaft. This compressor supplies enough air to permit operating the crane as a switching locomotive.

The crane is available as a self-propelling or non-propelling unit. The self-propelling unit is driven by a combination of spur and bevel gearing. The carbody has trucks with 11ft wheel bases and is of welded construction with deep-section box-girder side mem-

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bers tied together by welded structural units. Heavy-duty cast-steel center and end outriggers have been provided.

The swing machinery is driven by spur gears from the second clutch shaft, operated by an air-actuated friction clutch driving through a combination worm, spur and bevel gear reduction. Direction of swing is established by the master controller. A spring-set air-released post brake is mounted on the clutch and operated by a separate air valve. In case of air failure all brakes are set automatically.

The swing roller circle is a machined steel casting with four equalized conical roller assemblies in pairs. The crane has a welded structural-steel boom of curved design to provide maximum clearance for loads suspended at minimum radius. In addition to the main and auxiliary hoists, a whip hoist drum is available as optional equipment. The operator's station and control levers are enclosed in an all-steel cab built of panels which can be removed for maintenance, inspection and repairs to the machinery.

Also available are package units for converting Bucyrus-Erie 150, 160, 200 and 250-ton railway cranes from steam to diesel torque converters. Each of these package units includes a friction-type reverse transmission, a Twin Disc torque converter with end shaft and housing for chain drive, Twin Disc air-operated clutches mounted on a common shaft, an air compressor and a Kohler lighting unit.

For conversion of the 150 and 160-ton crane a Caterpillar D-337 diesel engine is used; for the 200 and 250-ton models a General Motors 6-110 diesel is used. *Bucyrus-Erie Company, South Milwaukee, Wis.* •



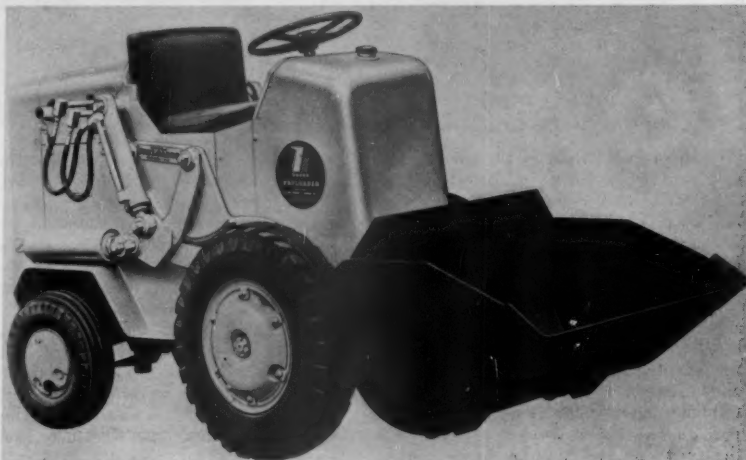
Lightweight Safety Goggle

The new American Optical No. 482 flexible goggle is of a lightweight mask type that fits the face closely with a comfortable, cushion-like effect. It is extra wide and may be worn over most types of regular and safety glasses and provides a wide field of vision. It is said to be highly resistant to impact

and to provide protection against flying particles at the front and sides and from all angles. The lens may be easily removed and replaced.

The goggle is available with clear or green acetate lenses. It has an adjustable elastic headband. The frame

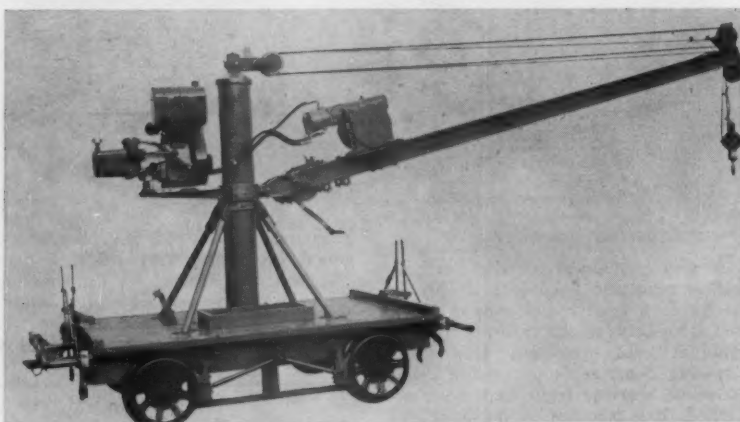
is vented to provide added comfort. Models are also available with vinylite lens, adjustable plastic headband and without vents for use as a chemical goggle. *American Optical Company, Safety Products Division, Southbridge, Mass.* •



New Tractor-Shovel

In a new Payloader tractor shovel, Model HA, the bucket size has been increased to a heaped load capacity of 18 cu ft and a struck load capacity of 14 cu ft. It is stated that the new model is more maneuverable than the former unit and that it can be operated into and out of box cars with ease. An entirely different bucket arm design is said to permit 40 deg of tipback and make it possible to carry heaped loads at a lower level.

A hydraulic accumulator has been provided to minimize load shocks and stabilize the hydraulic controls. Double-acting rams operate the boom arms and the bucket. Other new features are said to include improved steering, new solenoid starting controls, new ignition lock, dust-proof distributor, improved bucket construction, hose connectors, sealed grease fittings, new pin lock design, improved ground clearance, increased drawbar pull and a new parking brake. *Frank G. Hough Company, Libertyville, Ill.* •



Power Lift for Derrick Cars

A power lift is now being offered for the Fairmont W63 (8-ft boom) and W64 (13-ft boom) derrick cars. The power lift is applicable to the hoisting cable only. The boom cable is manually

operated. The lift includes an air-cooled engine, combination pump, reservoir and valve unit, hydraulic motor and a worm-type speed reducer. It may be applied to new units or to units already in service. *Fairmont Railway Motors, Inc., Fairmont, Minn.* •

THE RACOR STUD

(Patented)

deserves your consideration because...

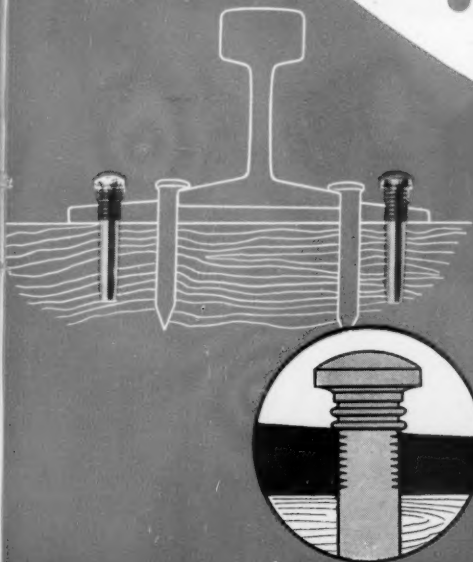
IT EXTENDS TIE LIFE

- BY REDUCING TIE ABRASION
- BY REDUCING SPIKE KILLED TIES
- BY REDUCING SPLIT TIES



IT PROVIDES STURDIER TRACK

- BY MAINTAINING BETTER LINE AND GAGE
- BY DEFERRING TIE REPLACEMENT
- BY REDUCING LABOR COSTS



The RACOR STUD securely driven becomes integral with the tie plate and restricts lateral movement most effectively.

Conclusive tests show a reduction of over 50% in tie wear by the use of the RACOR STUDS.

Low in cost, the RACOR STUD will show a high return through material and labor savings with sturdier, smoother and safer track.

Write for prices and complete descriptive literature.

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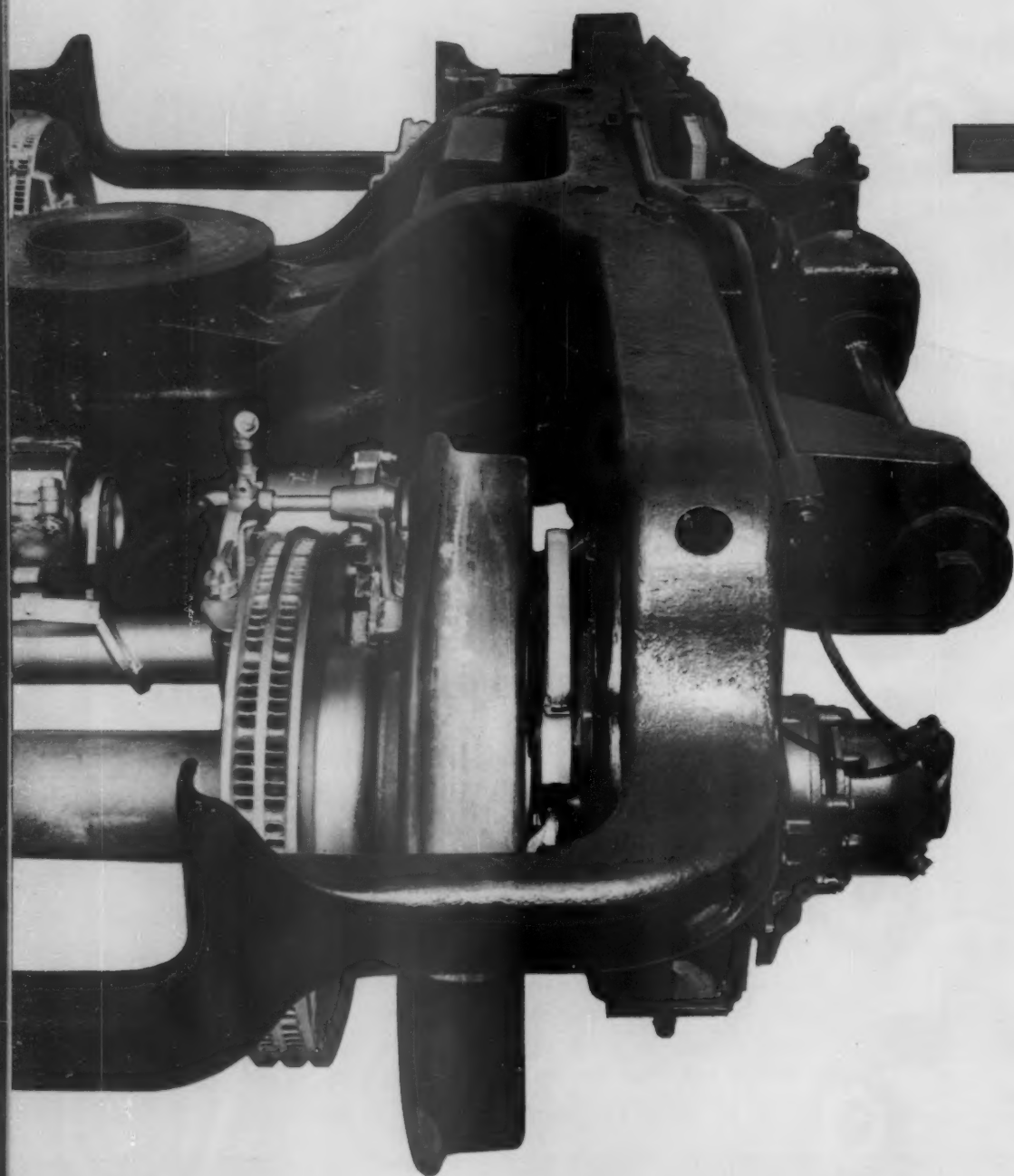
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Cal.; Niagara Falls, Ont., Canada.



PREDICTABLE PERFORMANCE



In August, 1951, we announced the sale of eighteen car sets of Budd railway passenger car disc brakes, with Rolokron anti-wheel slide device, to the Great Northern Railway. It was to be this railroad's first experience with them.

At the time we said in the railway trade press: "The performance of these brakes, and their savings in operation and maintenance costs, should provide the Great Northern with a revealing comparison with other brake equipment they employ. It is a comparison we always welcome."

In this case the comparison is unusually exact, for these disc-braked cars operated in consists with other cars, in exactly the same service. The comparative over-all cost of operating and maintaining the disc brake equipment reveals a saving of 76%.

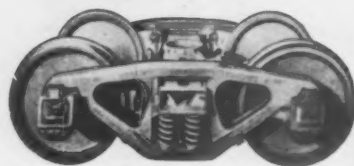
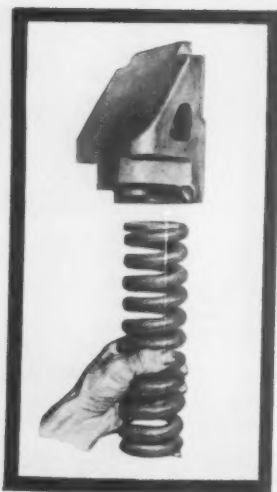
The twenty-two new all-stainless steel passenger cars we are now building for service in Great Northern trains will, naturally, be similarly equipped.

The Budd Company, Philadelphia 15.

Budd



It's a Snap!



Specify Smoother-Riding

YOU SHOULD HEAR WHAT CAR MEN TELL US...

about the quick and easy servicing of Barber Stabilized Trucks.

Actually, in just a few minutes, they've got the Stabilizer parts out, when it's necessary to dismantle a truck for wheel changes or other servicing. Dismantling requires no bars, special tools, prying or other special labor operation. That cuts maintenance costs to the bone. Re-assembly is just as simple, then the Barber Truck goes rolling on again, smoothing out freight car rides... trouble-free because its stabilizing principle is so simple. Fewest possible parts.

Today Barber Stabilized Trucks are giving dependable service for over 100 major railroads and private car lines who have specified and purchased a total of over 352,000 car sets! Standard Car Truck Co., 332 S. Michigan Ave., Chicago 4, Ill. In Canada: Consolidated Equipment Co., Ltd., Dominion Square Bldg., Montreal 2.

BARBER

STABILIZED TRUCKS

Financial

(Continued from page 16)

importance. The important thing is that Allegheny does control one of our largest railroad systems and the regulation thereof in the public interest is our responsibility. . . . The record also shows that Allegheny's investment portfolio for the future probably will consist primarily of railroad securities."

Future Acquisitions.—After setting out the trusteeship requirement with respect to any Mopac voting stock which Allegheny may obtain, the commission went on to say that this ruling was "not to be construed as giving advance approval or waiving in any manner the requirements of section 5(2) . . . with respect to acquisition of stock by Allegheny whereby it may acquire, accomplish, or effectuate direct or indirect control, or management in a common interest, of any additional carriers subject to the act. Presumably, when such situations arise in the future, Allegheny will comply with the provisions of section 5(2)." Those provisions require commission approval of acquisition-of-control transactions.

Earlier in the report, the commission referred to Allegheny's acquisition of "control of the board of directors" of Central, saying that was different from an election of individuals as members of a board. "In our opinion," the report added, "the Congress sought to prohibit that type of acquisition of control, unless approved and authorized by us upon consideration of an application, and upon our finding that the proposal would be consistent with the public interest."

North American to Acquire Mather Stock Car Company

William M. Spencer, chairman of the board of North American Car Corporation, and William J. Hagenah, chairman of the board of Mather Humane Stock Transportation Company, have announced that, subject to approval of stockholders, agreement has been entered into wherein North American would acquire substantially all assets of Mather, subject to liabilities. Mather assets include approximately 4,600 stock, refrigerator, box, tank and gondola cars; a well-equipped modern shop at Chicago Ridge, a suburb of Chicago; and other repair facilities at strategic points in the Middle West.

ICC Will Investigate NH-B&M Relationships

The Interstate Commerce Commission will institute an inquiry "into allegations that interests in control of the New Haven are attempting to acquire control of the Boston & Maine."

This was announced March 7 in a commission statement which added that

"consolidated management of the two railroads could be lawfully accomplished only upon authorization of the ICC." The announcement came after Massachusetts' two senators—Saltonstall and Kennedy—had written to Commission Chairman Mitchell, asking such an inquiry.

President Patrick B. McGinnis of the New Haven has revealed that persons friendly to him have approximately 45% of the B&M's stock, but he has pointed out that those persons are not connected with NH.

At the same time he predicted that the group would be able to take over control of the B&M (*Railway Age*, January 17, page 7). The annual meeting of B&M stockholders is scheduled for April 13.

Louisville & Nashville.—*Merger with NC&StL.*—The state of Tennessee, the Railway Labor Executives' Association, and the Brotherhood of Railroad Trainmen have been authorized by the Interstate Commerce Commission to intervene in this case (*Railway Age*, February 7, page 15).

Tillamook Airport Commission.

—*Switching Operation.*—The ICC has authorized the Tillamook County (Ore.) Naval Airport Commission to operate an existing 4.4-mile line of railroad located at Tillamook on the site of a former naval air station now leased to Tillamook county. The line provides switching service to industries located on the property and connects with the Southern Pacific.

Securities

Denver & Rio Grande Western.

—*Stock Split.*—Stockholders will be asked to vote at their annual meeting, on April 13, on a proposal to be submitted by the board of directors to split the company's common stock on a 3-for-1 basis.



FIRST TRAILERS in the Soo Line's new piggyback service arrived at Minneapolis March 2. Presently operated daily between the Twin Cities and Neenah, Wis., Menasha and

Applications

CHICAGO, ROCK ISLAND & PACIFIC.—To issue and sell \$65,000,000 income debenture bonds to redeem a preferred stock issue. The commission has already granted exemption from its competitive bidding requirements with respect to the debentures (*Railway Age*, February 28, page 37). They would be dated March 1, 1955, and due March 1, 1995, and their indenture would have sinking fund and redemption provisions.

SOUTHERN PACIFIC.—To assume liability for \$8,400,000 of equipment trust certificates, to finance in part acquisition of 69 diesel-electric locomotive units, as listed below, which are expected to cost a total of \$11,233,481.

Description and Builder	Estimated Unit Cost
31 1,750-hp six-axle freight units (Electro-Motive Division, General Motors Corporation)	\$213,368
4 1,750-hp four-axle passenger units (Electro-Motive)	185,755
4 1,600-hp six-axle freight units (American Locomotive Company)	199,281
17 1,000-hp switchers (Alco)	106,375
12 900-hp switchers (Alco)	98,621
1 660-hp, 70-ton freight unit (General Electric Company)	87,102

The certificates, dated March 1, would mature in 15 annual installments of \$560,000 each, beginning March 1, 1956. They would be sold by competitive bids which would fix the interest rate.

Authorization

BALTIMORE & OHIO.—To issue \$10,251,000 first mortgage 4% bonds, series C, due October 1, 1974; \$4,714,000 Southwestern division first mortgage 4% bonds, series B, due January 1, 1975; \$4,649,000 Pittsburgh, Lake Erie & West Virginia system refunding mortgage 4% bonds, series C, due November 1, 1974; and \$2,627,000 Toledo-Cincinnati division first lien and refunding mortgage 4% bonds, series G, due January 1, 1975 (*Railway Age*, January 24, page 43). The bonds would be used to reimburse the road's treasury in part for capital expenditures and to be pledged and repledged as collateral security for short-term bank notes in connection with the B&O refunding plan (*Railway Age*, February 21, page 16).

Dividends Declared

AKRON, CANTON & YOUNGSTOWN.—common, 50¢ semiannual; 5% preferred, \$2.50, semiannual, both payable April 1 to holders of record March 15; 5% preferred, \$2.50, semiannual, payable October 1 to holders of record September 15.

ALLEGHENY & WESTERN.—guaranteed, \$3, semiannual, payable July 1 and January 1, 1956, to holders of record June 21 and December 21.

CHICAGO SOUTH SHORE & SOUTH BEND.—15¢, payable March 15 to holders of record March 4.

DENVER & RIO GRANDE WESTERN.—in-

Appleton, with truck-competitive rates and minimum weights (*Railway Age*, February 28, page 9), the service will be extended "in the near future," a Soo Line spokesman says.

creased, \$1.50, payable March 21 to holders of record March 11.

MAINE CENTRAL.—6% prior preferred, \$1.50, quarterly, payable April 1 to holders of record March 24.

MINNEAPOLIS & ST. LOUIS.—35¢, quarterly, payable March 21 to holders of record March 10.

PITTSBURGH & LAKE ERIE.—\$1.50, quarterly, payable April 15 to holders of record March 18.

SEABOARD AIR LINE.—\$1, quarterly, payable March 25 to holders of record March 11.

Security Price Averages

	March 8	Prev. Week	Last Year
Average price of 20 representative railway stocks	90.31	91.22	62.17
Average price of 20 representative railway bonds	99.19	98.08	94.24

Organizations

"Human Relations in Management" will be the subject of a special two-week "Utility Management Workshop" and of a one-week "Industrial Research Conference," both to be held during May and June at Columbia University's Arden House, Harri-man, N.Y. The workshop is designed especially for executives of transportation, electric power, communication, gas and water industries. Preparations for it include compilation of a revised and up-to-date edition of the reference publication, "Annotated Bibliography of Audio-Visual Aids for Management Development Programs"; assembly of a team of educators, specialists and experts; a research survey of the latest findings in the fields of psychology, sociology, anthropology, psychiatry, learning theory, and management theory about human relations in management; and assembly of a special library for executives attending.

Newly elected officers of the **Illinois Territory Industrial Traffic League** are: President, Thomas A. Boint, freight traffic manager, National Lock Company; vice-presidents, Harold T. Reed, director of transportation, Line Material Company, and Leslie C. Alm, traffic manager, Kewanee-Ross Corporation; and secretary-treasurer, Arthur J. Maurer, assistant traffic director, Chicago Association of Commerce & Industry.

David L. Arm, dean of the school of engineering at the University of Delaware, has been appointed manager of the industrial department of the **National Safety Council**.

The **Oakland Traffic Club** has elected the following officers for 1955: President, Maryn J. Fauria, traffic manager, Fruitvale Canning Company; vice-president, John C. Sutherland, transportation manager, Haslett Warehouse Company; secretary, R. D. Stokes, assistant traffic manager, Howard Terminal; and treasurer, Dwight Yeaman, office manager, Haslett Warehouse Company.

The 1955 convention of the **National Association of Railroad & Utilities Commissioners** will be held October 24-27, in Asheville, N.C., instead of in San Francisco, as originally planned.

The **Traffic Club of New Orleans** has elected the following officers for 1955: President, Fred T. Haab; vice-presidents, Franklin M. Schilling, Lewis I. Bourgeois, and D. J. Lyons; treasurer, James B. Puig; and secretary, Rene J. Pigeon.

The **Railroad General Agents Association of Seattle** has elected the following officers for 1955: President, H. H. Tipple, general agent, Santa Fe;

vice-president, Marshall O. Culton, general agent, Monon; secretary-treasurer, C. G. Akton, general agent, passenger department, Southern Pacific.

T. H. Martin, general manager of Canadian National Express, has been elected chairman of the executive committee of the **Express Traffic Association of Canada**.

The third annual meeting of the **Railroad Public Relations Association** will be held June 16-18 in the Broadmoor Hotel, Colorado Springs, Colo. Members of the Program Committee are William E. Hayes, chairman; Paul M. Bunting, Arthur C. Carlson, Russell A. Erickson, R. G. Hodgkin, Jr., K. C. Ingram, Frank V. Koval, Charles S. Pope, Frank Richter and Harold M. Sims. The Arrangements and Publicity Committee is composed of Ray J. Maxwell, chairman; Ralph W. Ater, Robert L. Barbour, M. R. Cring, Louis T. Henderson, Paul M. Morris, Paul D. Shoemaker, Howard Skidmore and Gilbert Smith.

The **American Railway Magazine Editors' Association** will hold a one-day spring meeting in Baltimore, May 13, and its annual meeting in the Broadmoor Hotel, Colorado Springs, Colo., September 28-30.

The following officers of the **Kansas City Passenger Agents' Association** were installed at the February meeting: President, W. R. Huber, district passenger agent, Wabash; vice-presidents, J. D. Walker, district passenger agent, Baltimore & Ohio, and A. B. Nowell, ticket agent, Town House Ticket Office; and secretary-treasurer, W. R. Buskirk, chief clerk, St. Louis Southwestern.

Malory McDonald, in charge of public relations for the Missouri Pacific in Texas and Louisiana, has been elected a vice-president of the **Public Relations Society of America**, to represent it in the Southwestern district.

The following have been elected officers of the **Western Association of Railway Tax Commissioners**: President, Max L. Boydston, tax commissioner, Milwaukee; vice-presidents, R. W. Roach, real estate and tax commissioner, Rock Island, D. E. Brummitt, land and tax commissioner, Wabash, and G. E. Brandon, land and tax commissioner, Minneapolis & St. Louis; and secretary-treasurer, L. R. Norberg, assistant tax commissioner, Milwaukee.

The 96th regular meeting of the **Atlantic States Shippers Advisory Board** will be held at the Hotel John Marshall, Richmond, Va., April 13-14.

The **Railroad General Agents Association of San Francisco** has elected the following officers for 1955: President, James K. Speight, Denver & Rio Grande Western; vice-presidents, Raymond M. Young, Boston & Maine, Lon J. Breedlove, Chesapeake & Ohio,



THIS CATERPILLAR-HAULED SLEIGH TRAIN, operated by the road transport department of the Canadian National, moves over a roughly constructed tote road to bring supplies from the railhead at Hillsport, Ont., to a mining site at Manitouwadge. Sleigh trains are the only

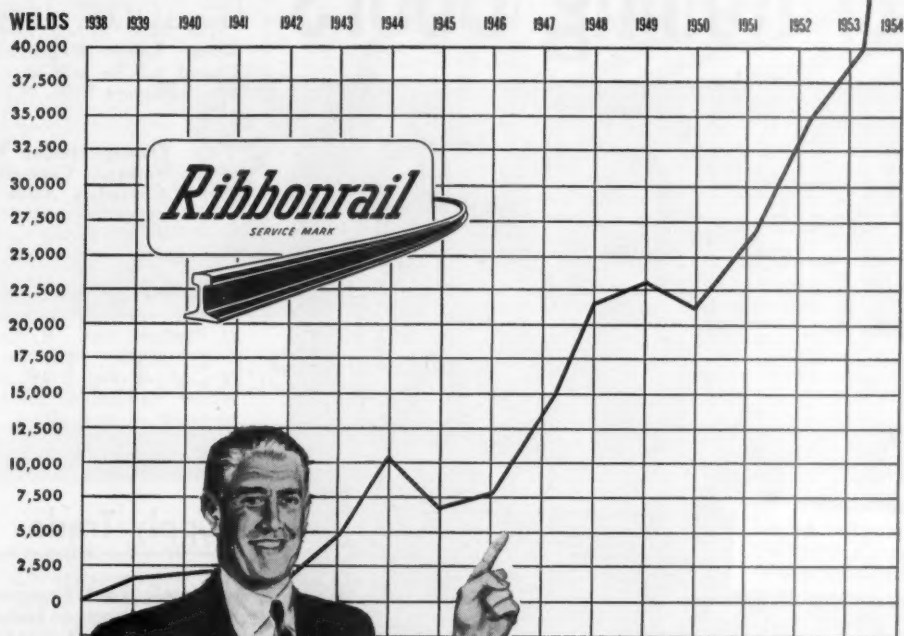
vehicles to match the stubborn countryside at the moment, to deliver supplies to contractors building the Geco Mines, 24 mi southwest of the CNR's main line to the west. The Canadian National is building a branch line to the mine (*Railway Age*, May 17, 1954, page 11).

CONTINUOUS RAIL PRODUCTION

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
duce this total number of welds . . . the equivalent of more than 260 miles of single track.

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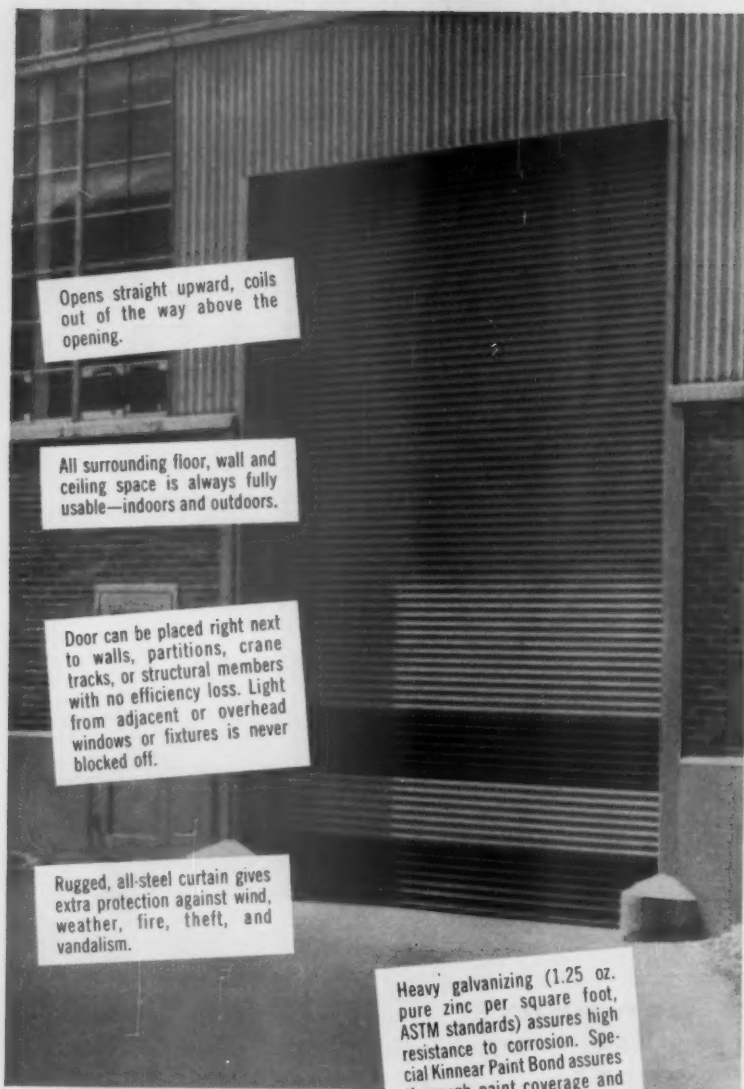
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and George P. Schultz, Baltimore & Ohio; secretary, W. Eugene Pry, Pennsylvania; and treasurer, Ralph E. McGlothlen, Cotton Belt.

The **Transportation Club of Peoria** has installed the following officers: President, Ralph A. Barnett, division freight agent, New York Central; vice-presidents, Keith E. Hopkins, manager, traffic division, Caterpillar Tractor Company, and L. R. Barnewolt, general agent and traffic manager, Peoria & Pekin Union; and secretary-treasurer, C. M. Abernathy, assistant to traffic manager, Keystone Steel & Wire Co.

The 32nd annual meeting of the **Great Lakes Regional Advisory Board** will be held at the Hotel Niagara, Niagara Falls, N.Y., March 22-23.

The **Transportation Department of the National Council of Young Men's Christian Associations** will hold a triennial assembly of Railroad YMCA's at the Congress Hotel, Chicago, November 9-11.

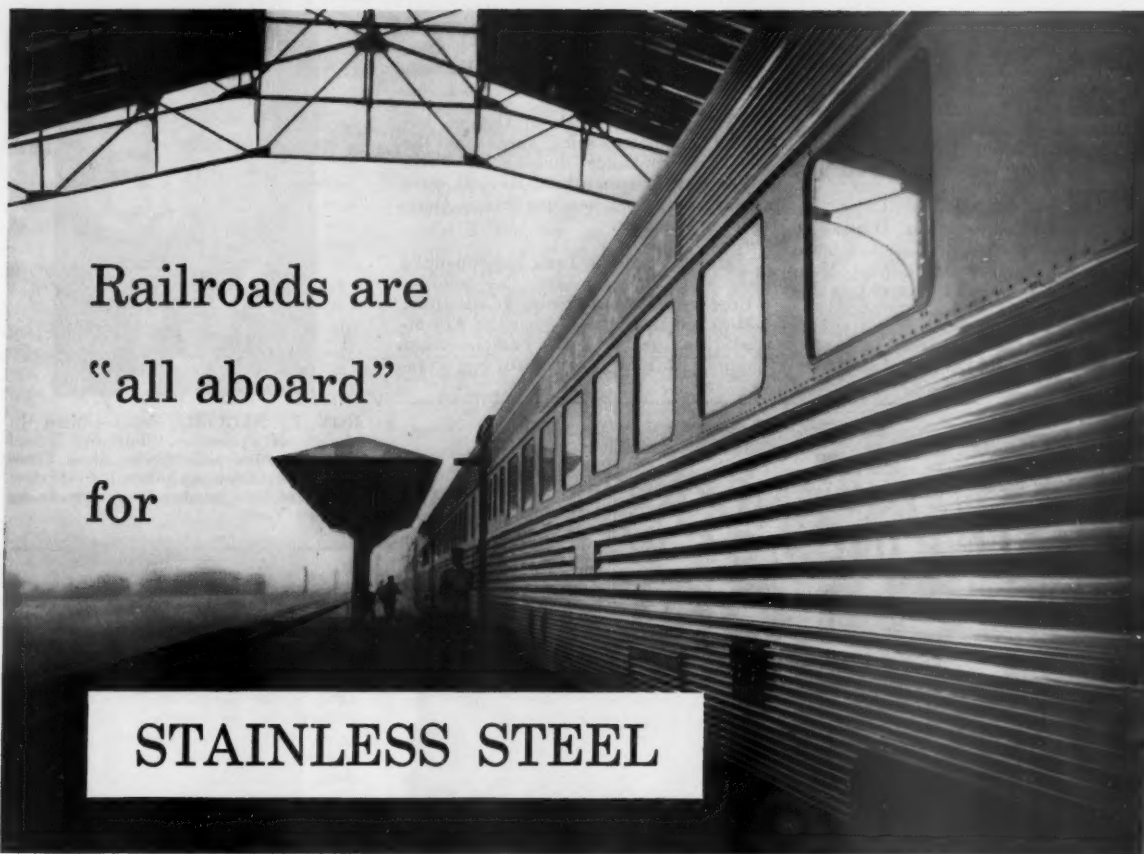
The **Pacific Northwest Advisory Board** will hold its annual meeting at Portland, Ore., March 23 and 24. Guest speaker will be Marvin L. McLain, director, grain division, Commodity Stabilization Service, U. S. Department of Agriculture.

Supply Trade

Plomb Tool Company has purchased the assets of **Industrial Tools Manufacturing Company** and formed an operating subsidiary known as **Industrial Tools Manufacturing Corporation**. The newly acquired



R. LEE MITCHELL has been named general manager, railroad sales division, New York Air Brake Company. Mr. Mitchell was formerly assistant to K. E. Keiling, vice-president—railroad sales, who has retired but continues as a director of the company.



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SPOTLESS GALLEY CARS made of stainless steel save time and labor in cleaning, facilitate quick, sanitary servings.

plant is located near the parent company's factory in the Los Angeles industrial district.

James D. McLean, general sales manager, government and industrial division of **Philco Corporation**, has been appointed vice-president, sales, of that division.

Whiting Corporation (Canada), Ltd., has opened a new district office at 660 St. Catherine street, West, Montreal, with **Joseph V. Rozycki** as district manager.

C. O. Reeder, assistant manager, transportation department, **Continental**

Oil Company, has been named department manager, at Ponca City, Okla., succeeding **Paul H. Kuhns**, retired.

Edward W. Kush of Omaha, has been appointed sales agent for the railway appliance division of **True Temper Corporation**. He will serve railroads having headquarters in Omaha and Denver.

Hertz Stations, Inc., has appointed six new city managers, as follows: **Edward M. Armstrong, Jr.**, Detroit; **Howard B. Coons**, Louisville; **Thomas Mazzocchi**, San Francisco car rental; **Daniel J. Sullivan**, San Fran-



ROY L. SALTER, vice-president in charge of operation, **Southern Wheel division, American Brake Shoe Company**, has been appointed first vice-president, his headquarters remaining in New York.

cisco truck rental; **Gerald A. Parker**, Dallas; and **Marion M. Burns**, Fort Worth.

Warwick J. Hayes, Jr., sales manager, **Industrial Brownhoist Corporation**, has been named vice-president, sales, and **E. W. Taylor, Jr.**, chief engineer, has been named vice-president, engineering.

Earle M. Harshbarger, formerly railroad sales manager, **SKF Industries, Inc.**, has become associated with the **Miller Bearings Company**, Lakeland, Fla., as manager of the railroad department.

Karl N. Heimbach, resident engineer in Mexico for **General Railway Signal Company** on the Valle de Mexico project of the National Railways of Mexico, has been appointed sales engineer for GRS at New York.

G. E. Carothers, a representative of **Westinghouse Air Brake Company**, Air Brake division, at New York, has been appointed assistant manager, southeastern district, at Washington, D.C.

American Hoist & Derrick Co. has acquired the **Thomas Laughlin Company** of Portland, Me., manufacturers of forged wire rope accessories, as the first step of a planned expansion program. The plant will be operated as a division of American Hoist.

Pacific Coast Borax Company has opened a new district sales office at 4010 Washington street, Kansas City, Mo., to serve the package, agricultural sales and industrial sales divisions of the company.

OBITUARY

Chester F. Sampson, western representative of **Franklin Balmar Corporation**, at Chicago, died March 2 after a long illness.



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Railway Officers

Seatrain Elects McCarthy President; Brush Chairman

Henry F. McCarthy, executive vice-president of Seatrain Lines, Inc., was elected president on March 7, and will serve as chief executive officer of the company.

On the same date, Graham M. Brush, Sr., original designer of Seatrain facilities, founder of the company, and its president since 1929, was elected chairman of the board. Mr. Brush will continue his activities in the company's long-range development program.

Mr. McCarthy, a native of Portsmouth, N.H., and a graduate of Harvard College and Yale University, has been active in the transportation field



Henry F. McCarthy

since the early 1930's. He has held the positions of assistant general traffic manager of the Cotton Belt; passenger traffic manager of the Boston & Maine; general traffic manager of Northeast Air Lines; and vice-president of the New Haven. He joined Seatrain as vice-president in November 1950, and became executive vice-president in August 1953.

Mr. McCarthy holds a Presidential Citation of Merit for his work as assistant director in charge of the Railroad division of the Office of Defense Transportation during World War II.

BALTIMORE & OHIO.—H. S. Smith, assistant general freight agent at Cincinnati, Ohio, has been appointed general freight agent at Detroit, Mich., succeeding Harry J. Cartier, who has been transferred to Cincinnati. L. V. Haskett, commerce agent, succeeds Mr. Smith as assistant general freight agent at Cincinnati.

Abram Clark, assistant engineer of bridges and buildings, has been appointed engineer of bridges and buildings, with headquarters as before at Baltimore, succeeding Charles E. Sloan, who retired March 1, after 44 years of railroad service, 42 of which were with the B&O. J. T. Collinson, division engineer at Cincinnati, has

been transferred to Akron, Ohio, succeeding Guy Long, who has retired after 39 years of service. B. J. Johnson, assistant division engineer of the Baltimore division at Baltimore, has been promoted to division engineer at Cincinnati, succeeding Mr. Collinson.

BOSTON & MAINE.—Foster R. Spofford, engineer maintenance of way at Boston, has been appointed assistant chief engineer at that point, succeeding Henry C. Archibald, who retired February 28 after 40 years of service. Harold S. Ashley, assistant to chief engineer, succeeds Mr. Spofford as engineer maintenance of way, and Robert F. Garner, division en-

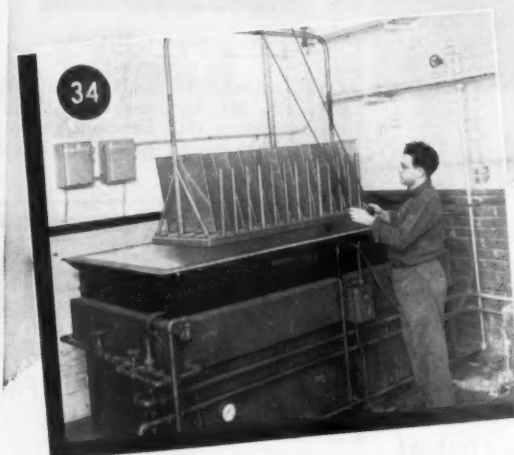
gineer of the Fitchburg division, replaces Mr. Ashley as assistant to chief engineer at Boston. Donald S. Denio, assistant division engineer of the Fitchburg division, has been promoted to division engineer, with headquarters as before at Greenfield, Mass. William E. Kiley, track supervisor on the Terminal division, succeeds Mr. Denio as assistant division engineer at Greenfield.

A photograph of Mr. Spofford was published in *Railway Age* September 13, 1954, page 42.

CHICAGO & NORTH WESTERN.—Cyril O. Dienberg has been named general agent at Rockford, Ill., effective

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tive April 1, succeeding R. E. Williams, who is retiring.

DOMINION ATLANTIC. — John Chalmers McCuaig, superintendent of the Schreiber division of the Canadian Pacific at Schreiber, Ont., has been appointed manager of the DA (a CPR subsidiary) at Kentville, N.S., succeeding A. A. Dunphy, who retired February 1 after 48 years of rail-



John Chalmers McCuaig

road service, 43 of which were with the CPR. Mr. McCuaig entered railroad service in 1918, becoming general safety agent for the Eastern region of

the CPR in 1944; general supervisor safety, loss and damage prevention in 1950; and superintendent of the Schreiber division in 1952. He served as acting general manager of the Quebec Central (another CPR subsidiary) at Sherbrooke, Que., for a few months in 1952.

FRISCO. — R. C. Culter, traffic manager at Joplin, Mo., has been transferred to Kansas City; L. A. Tidwell, traffic manager at Fort Smith, Ark., has been transferred to Joplin; and A. C. Bringleson, traffic manager at Kansas City, has been transferred to Fort Smith.

GREAT NORTHERN. — Thomas J. Clancy, traveling storekeeper at St. Paul, has been appointed district storekeeper at Hillyard Store, Wash., succeeding W. O. Lechner, who retired March 1 after more than 46 years of service. G. H. Patterson has been appointed assistant to general storekeeper at St. Paul.

ILLINOIS CENTRAL. — C. P. Laenhardt has been appointed general land agent at Chicago, succeeding W. C. Horton, who has retired after more than 37 years of service. V. L. Sides has been named general tax agent at Chicago.

Charles L. Tuttle, general agent at Joliet, Ill., has been transferred to Chicago, and has been replaced by

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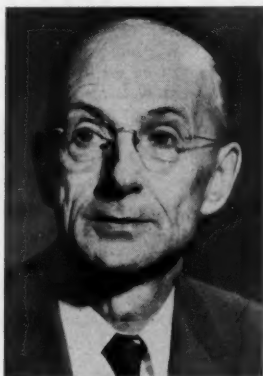
SERVING INDUSTRY SINCE 1894

Raymond M. Vander Heyden, traffic agent at Chicago.

JERSEY CENTRAL. — **Warren W. Boyce**, division storekeeper at Elizabethport, N.J., has been appointed assistant purchasing agent at New York. The jurisdiction of **Joseph V. Hanrahan**, supervisor of stores at Elizabethport, has been extended to include the Pennsylvania division. The position of general storekeeper, Pennsylvania division, has been abolished.

KANSAS CITY TERMINAL. — **H. W. Mathews**, master mechanic, has been appointed superintendent, succeeding **W. J. Dawson**, who is on an extended leave of absence. **W. M. Lehman**, general car foreman, has been named acting master mechanic, replacing Mr. Mathews, and **O. R. Strode**, assistant general car foreman, has been named acting general car foreman. **C. F. Peters**, personnel officer of the Rock Island, has been appointed manager personnel of the KCT, succeeding **H. VR. Bradshaw**, who has been relieved at his own request.

MINNEAPOLIS & ST. LOUIS. — **Clarence E. Bailey**, assistant treasurer and assistant comptroller at Minneapolis, has been promoted to treasurer.



Clarence E. Bailey



Enoch Anderson

urer there. **Enoch Anderson**, auditor of disbursements, has been advanced to general auditor at Minneapolis.

MISSOURI-KANSAS-TEXAS. — **L. T. Thoman** has been appointed to the newly created position of assistant general freight and passenger agent at Birmingham; the position of general agent has been abolished.

MISSOURI PACIFIC. — **Albert J. Connors**, assistant general agent, passenger department, has been promoted to general agent, passenger department, at St. Louis, succeeding **William F. Miller**, retired. **Fred W. Laskwitz**, city passenger agent, has been advanced to district passenger agent at St. Louis, and **Elmer C. Toensing** has been named city passenger

agent. **William J. Whitaker**, general agent at Birmingham, Ala., has been advanced to general freight agent at Houston, and has been replaced by **Thomas B. Arnold**, who transfers from Alexandria, La. **Leland B. Bartlett**, traffic representative at New Orleans, succeeds Mr. Arnold. **Edwin Elmo Hunt**, special traffic representative at St. Louis, has been appointed general agent at Winston-Salem, N.C., succeeding **Joe McKinley Bryan**, who has been transferred to a new traffic agency at Richmond, Va.

Myers Ernest Baile, assistant general purchasing agent at St. Louis, retired February 28.

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SANTA FE.—J. B. Noe, division superintendent at Argentine, Kan., has been appointed assistant general manager, Eastern district, at Topeka, Kan., succeeding P. O'Sullivan, who has retired after 47 years of service. Mr.



J. B. Noe

ger, Eastern district, at Topeka, Kan., succeeding P. O'Sullivan, who has retired after 47 years of service. Mr.



E. R. Robertson

Noe's successor is E. R. Robertson. Henry Schulteis, Jr., has been named assistant to general manager at



L. A. Grotewohl

Topeka. A. L. Soule, assistant to general manager, Eastern lines, at Topeka, Kan., has retired after more than 48

years of service. His successor is M. H. Coble.

George M. Strachan, assistant engineer at Chicago, has retired after more than 46 years of service.

T. H. McKibben, assistant chief engineer of the Eastern lines, at Chicago, retired March 1 after more than 52 years of service.

Charles H. Anderson, commissioner of taxes and manager of insurance at Chicago, his retired after 51 years of service. His successor is L. A. Grotewohl, assistant commissioner of taxes and assistant manager of insurance, who has been given the newly created title of commissioner of taxes and insurance.

SEABOARD. — A. J. Mitchell, commercial agent at Tampa, Fla., has been appointed district freight agent at Palmetto, Fla., succeeding L. A. Jones, promoted.

SOO LINE.—Vernon K. Boe, assistant tax commissioner, has been promoted to tax commissioner.

Kenneth H. Peterson, general service manager, traffic, has been named supervisor, Rail-Van Service, at Minneapolis.

UNION PACIFIC. — Marvin A. Arnold has been named general agent at Dallas, Tex. Rhee Fife has been appointed general passenger agent at Salt Lake City, succeeding A. G. Bloom, who retired February 28 after 48 years of service. L. J. McKernan, city passenger agent at Philadelphia, succeeds Mr. Fife as general agent, passenger department, at New York.

VIRGINIAN. — W. W. Osborne, master mechanic, Norfolk division, at Victoria, Va., has been appointed assistant superintendent motive power at Princeton, W. Va. W. A. Grigg, general foreman at Mullens, W. Va., succeeds Mr. Osborne as master mechanic at Victoria.

OBITUARY

George P. Carlbrey, 68, who retired in 1952 as general agent of the Canadian Pacific at Boston, died February 28.

O. W. Cox, 75, who retired in 1949 as general traffic manager of the Norfolk & Western at Roanoke, Va., died January 20.

Lynne E. Craig, 65, general agent of the Santa Fe at San Jose, Cal., died February 27 at his home there.

Roscoe K. Cross, 74, who retired in 1950 as general agent of the Northern Pacific at St. Louis, died at his home in Huntington, Long Island, N.Y., February 19.

W. B. Plaine, division passenger agent of the Norfolk & Western at Norfolk, Va., died January 22, after suffering a cerebral hemorrhage.

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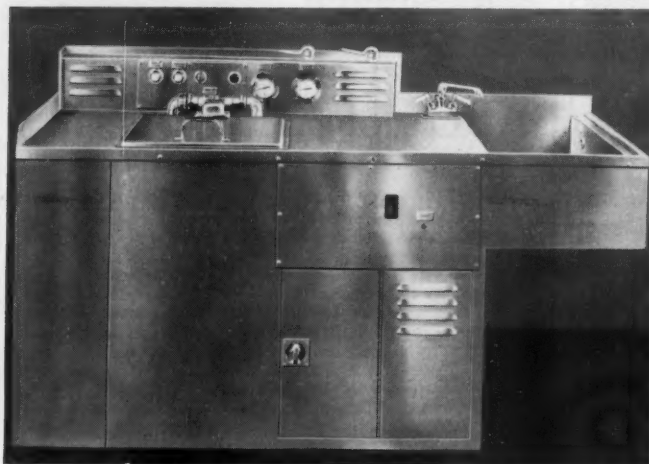
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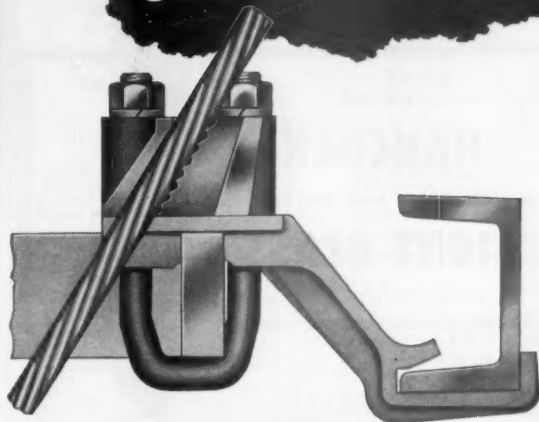
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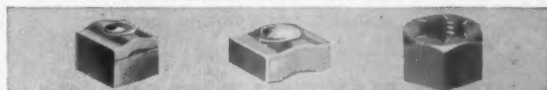
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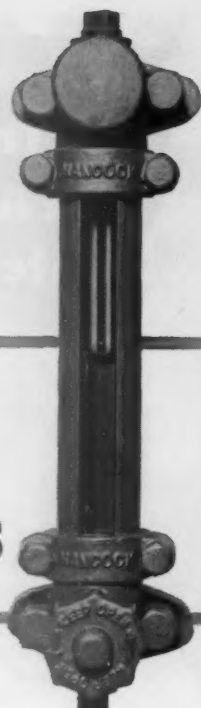
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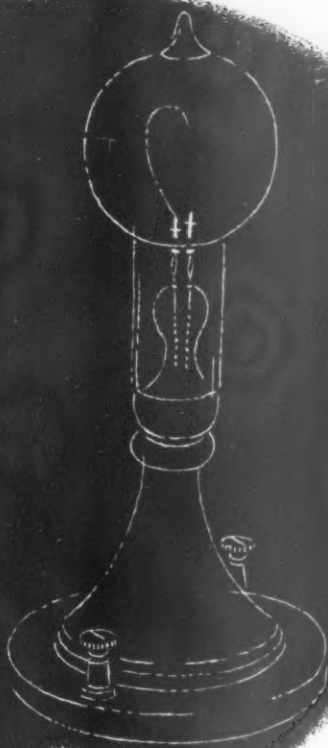
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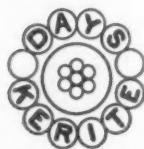
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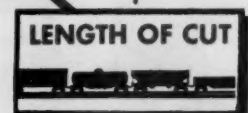
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